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CONTENTS/SOMMAIRE

	Nr.	Page
The Taxation of the Transfers and proposed Realignment of Tax Policies and Procedures within the Framework of the "Common Market", by P. B. Dertilis	1	5
Résumé: La Taxation des Affaires et l'Alignement des Politiques et des Procédures de Taxation dans le Cadre du „Marché Commun"	1	13
Budget et Politique Economique: le Budget Française de 1959, par E. Vessillier	1	15
Summary: Budget and Economic Policy: The French Budget for 1959	1	37
Import Duties and the Basic Equations of Social Accounting, by H. Burton	1	39
Résumé: Droits d'Entrée et Equations de Base de la Comptabilité Nationale	1	46
The Changing Pattern of Local Governmental Revenue in the United States, by C. Ward Macy	1	47
Résumé: Modifications dans les Systèmes de Recettes des Collectivités Locales aux Etats Unis	1	65
The Limits of Taxation, by Amotz Morag	1	68
Résumé: Les Limites de l'Imposition	1	84
Note on Incidence under Monopoly, by Pradhan Harishankar Prasad	1	85
Le Congrès de l'Institut International de Finances Publiques, septembre 1958, Bruxelles, par M. Masoin	1	87
Editorial	2	101
Les Mesures Fiscales propres à favoriser les Investissements, par Nerio Nesi et F. Saverio Seganti	2	103
Summary: Taxation Measures to encourage Investments	2	123
On the Obsolescence of Incidence, by J. A. Stockfisch	2	125

	Nr.	Page
Résumé: Du Caractère Périmé de l'Incidence . . .	2	149
Counter-inflationary Fiscal, Monetary and Direct Control Measures in an Under-developed Country, by Santikumar Ghosh	2	151
Résumé: Mesures Fiscales, Monétaires et de Controle Direct, à Caractère Anti-inflatoire, dans un Pays Sous-développé	2	163
The Shifting, Incidence, and Effects of the Corporate Net Income Tax in a Macroeconomic Setting, by Gerhard N. Rostvold	2	164
Résumé: Le Translation, l'Incidence et les Effets de l'Impôt sur le Revenu Net des Sociétés dans un Système Macroéconomique	2	188
Excise Tax Incidence in an Imperfectly Competitive Economy, by Paul Wells	3/4	203
Résumé: L'Incidence des Droits d'Accise dans une Economie Imparfaitement Concurrentielle . . .	3/4	217
Investment Incentive and Income Tax, by P. Puthucheary	3/4	218
Résumé: L'Incitation à Investir et l'Impôt sur le Revenu	3/4	234
Taxation in South Viet-Nam, by Richard W. Lindholm	3/4	236
Résumé: La Fiscalité du Viet-Nam Méridional . .	3/4	248
Export Taxes in Ceylon, 1948—'52, by Charles E. Staley	3/4	249
Résumé: Les Impôts à l'Exportation à Ceylan, 1948—'52	3/4	266
The Counter-cyclical Behaviour of Public Investment in the United Kingdom since the War, by S. Please	3/4	269
Résumé: Les Effets de l'Investissement Public dans la Lutte Anti-cyclique au Royaume-Uni depuis la Guerre	3/4	281
Fiscal Policy in an Expanding Economy: A Case Study of Pakistan, by A. M. Huq	3/4	283

	Nr.	Page
Résumé: Politique Financière dans une Economie en Expansion. Étude d'un Cas: Le Pakistan . . .	3/4	313
Indirect and Direct Taxation in an Export Economy: A Case Study of the Republic of The Sudan, by Z. M. Kubinski	3/4	316
Résumé: Impôts Directs et Indirects dans une Economie d'Exportation. Etude d'un Cas: La République du Soudan	3/4	344

BOOK REVIEWS/CRITIQUES

Richard de Falleur et Etienne Sadi Kirschen, Analyse input-output de l'économie belge en 1953, par M. Frank	1	91
Giorgio Stefani, Problemi Tributari Nell'Economia del Benessere, par M. Masoin	2	191

ALPHABETICAL LIST OF THE AUTHOR'S NAMES
LISTE ALPHABETIQUE DES NOMS D'AUTEURS

	Nr.	Page
Burton, H.	1	39/46
Dertilis, P. B.	1	5/14
Ghosh, Santikumar	2	151/163
Huq, A. M.	3/4	283/315
Kubinski, Z. M.	3/4	316/346
Lindholm, Richard W.	3/4	236/248
Macy, C. Ward	1	47/67
Masoin, M.	1	87/90
Morag, Amotz	1	68/84
Nesi, Nerio	2	103/124
Please, S.	3/4	269/282
Prasad, Pradhan Harishankar	1	85/86
Puthucheary, J.	3/4	218/235
Rostvold, Gerhard N.	2	164/190
Seganti, Saverio	2	103/124
Staley, Charles E.	3/4	249/268
Stockfisch, J. A.	2	125/150
Vessillier, E	1	15/38
Wells, Paul	3/4	203/217

In Memoriam

Dr. J. A. Monod de Froideville

De directeur en hoofdredacteur van „Public Finance" Dr. J. A. Monod de Froideville is op 27 februari j.l. te Haarlem plotseling overleden. Het tijdschrift heeft met dit verscheiden van zijn geestelijke vader het zwaarst denkbare verlies geleden. Het kost moeite zich in te denken dat de centrale figuur aan deze uitgave is ontvallen en dat het tijdschrift de weg verder zal moeten vinden zonder zijn voortdurende zorg en inspanning.

Een veelzijdig mens met grote wetenschappelijke belangstelling is van ons heengegaan.

Na een inleidende studie aan de toenmalige Handelshogeschool te Rotterdam vestigde hij zich in een van de kleinere plaatsen van het land. De drang naar wetenschappelijke ontplooiing dreef hem echter verder en in 1933 deed hij aan dezelfde inrichting van hoger onderwijs zijn doctoraal examen in de economische wetenschappen, met een aantal juridische bijvakken.

Reeds op jeugdige leeftijd verschenen verschillende publicaties van zijn hand en wel over zeer onderscheidene onderwerpen. Ik herinner mij een studie over havenschappen uit de tijd dat de groei van de Rotterdamse havens zijn speciale belangstelling had, een publicatie „De economische betekenis van de luchtvaart in het moderne snelverkeer" en, bij de inzet van de crisis in de dertiger jaren, „De werkeloosheid als economisch en politiek vraagstuk".

In de latere jaren werd zijn aandacht blijvend bepaald bij vraagstukken van fiscaal beleid en van openbare fi-

nanciën, niet verwonderlijk voor een economist met een juridische instelling. In 1940, vlak na het uitbreken van de oorlog, behaalde hij dan ook, onder leiding van Prof. Adriani, de doctorsgraad op een belangrijk proefschrift „Bestemmingsheffingen". Het valt op dat hij reeds toendertijd, ten behoeve van de voorbereiding van zijn dissertatie, belangrijke internationale contacten legde en aan de buitenlandse bestemmingsheffingen grote aandacht wijdde.

Ook andere waardevolle studiën op financieel gebied verschenen: zo een publicatie betreffende de administratieve rechter in zaken van directe belastingen en „De fiscale gerechtigheid als ethisch moment in de belastingleer". Reeds uit de aangeduide verscheidenheid van onderwerpen blijkt dat de geest van deze studiosus te breed en te open was om zich bij enkele beperkte onderwerpen te bepalen.

Het is juist ook deze behoefte om ruimte te zoeken die hem heeft geïnspireerd tot de oprichting van het tijdschrift „Openbare Financiën". Het is zeker niet toevallig dat dit initiatief tot stand kwam kort na de oorlog toen, na de beperkingen en het isolement van de oorlogstijd, de drang naar wetenschappelijke verdieping en verruiming voor hem onweerstaanbaar werd. Hij constateerde de afwezigheid in Nederland van een tijdschrift, waar men op het gebied van de openbare financiën tot de wortel kon doordringen en waar de zich voordoende vraagstukken uit economische, juridische, historische, mathematische of algemeen wijsgerige gezichtshoek zouden kunnen worden bezien. Hij doorbrak ook reeds dadelijk de nationale grenzen, herstelde de reeds vroeger gelegde internationale contacten en voegde er vele nieuwe aan toe. Het tijdschrift ving dan ook zijn levensloop aan met een lijst van redactieleden en vaste medewerkers van zeer brede, nationale en internationale samenstelling.

En toch wenste hij een nog bredere opzet. Het was alsof ook hier het motto van zijn proefschrift hem niet losliet:

het woord van Bergson: „En vain nous poussons le vivant dans tel ou tel de nos cadres. Tous les cadres craquent. Ils sont trop étroits". Het internationale karakter van het tijdschrift werd nog in sterke mate geaccentueerd en de staf van medewerkers werd tot over de gehele wereld uitgebreid. En bij die verdere verruiming en verbreding bleef de zorg om tegelijkertijd het hoge niveau te handhaven, en zelfs te verbeteren, onverflauwd bestaan.

Dit tijdschrift is het geesteskind van Monod. Zonder aan iemand, die zijn goede krachten aan de bloei ervan heeft gegeven, te kort te doen, mag ik toch wel stellen dat het Monod is geweest, wien in de barre oorlogsjaren en vlak daarna het ideaal van een internationaal tijdschrift van hoog wetenschappelijk niveau voor ogen heeft gezweefd, die in alle opzichten de drijvende kracht is geweest om het tot realiteit te brengen en die vervolgens niet afgelaten heeft het te handhaven, te beschermen en te verbeteren.

Slechts betrekkelijk weinigen weten hoeveel arbeid Monod aan het bereiken van dit doel heeft besteed, hoeveel zorgen hem dit heeft gegeven en hoveel opofferingen van allerlei aard dit van hem heeft gevraagd.

Gedragen door een groot idealisme, tot liefde verdiept voor het tijdschrift, waarin dit idealisme zijn weerslag in de realiteit had gevonden, heeft hij met nooit aflatende energie doorgezet. In de consolidatie van dit tijdschrift heeft hij de bekroning van zijn arbeid mogen beleven. En wij moeten met dankbaarheid vaststellen dat Monod zich aldus voor de wetenschappelijke bestudering van de openbare financiën in internationaal verband grote verdiensten heeft verworven. Mogen de vruchten van zijn activiteit tot in lange jaren behouden blijven.

Hare Majesteit de Koningin der Nederlanden heeft zijn verdiensten erkend door hem te benoemen tot Officier in de Orde van Oranje Nassau. Het lag ook voor de hand dat hij werd verkozen tot Voorzitter van de Nederlandse

afdeling van de International Fiscal Association, van welke laatste organisatie hij reeds jaren bestuurslid is.

Allen die hem hebben gekend zullen bij het bericht van zijn verscheiden geschokt hebben stilgestaan. Vóór alles zullen zij zich bewust zijn geworden dat een bijzonder mens van ons is heengegaan. Zijn omgang met degenen, die hij, in welke kwaliteit ook, ontmoette, kenmerkte zich door een in deze tijd bijna ongewone hoffelijkheid. Een hoffelijkheid, welke met uiterlijke plichtplegingen niets van doen had, maar een rechtstreekse weerslag was van een zeldzame fijnheid in zijn wezen. Hij mat alles en allen met de hoge maat, waarmede hijzelf alleen gemeten kon worden en ik aarzel niet te zeggen dat de onbevangenheid, waarmede hij anderen benaderde ontroerend moet worden genoemd.

Op 4 maart jl. is hij te 's-Gravenhage ten grave gedragen.

Hij ruste in vrede.

VAN DEN BERGE.

In Memoriam

Dr. J. A. Monod de Froideville

On 27 February 1959 the director and editor-in-chief of Public Finance, Dr. J. A. Monod de Froideville, suddenly died in Haarlem. By the death of its parent this journal has suffered the heaviest loss conceivable. It is difficult to realize that its central figure has been snatched away and that the journal will henceforth have to find its way without his unceasing care and efforts.

A many-sided man with great scientific interest has passed away.

After an introductory course of study at the then Commercial College in Rotterdam, he settled in one of the smaller towns of our country. He could not, however, resist the urge towards further scientific expansion and in 1933 he completed his studies at the same College, passing the final examination in economics and some legal subsidiaries.

Already at an early age several publications from his hand appeared on widely differing subjects. I remember a study on harbour boards dating from the time when the growth of the Rotterdam harbours had a special appeal for him, an article entitled "The economic significance of aviation in modern high-speed traffic", and at the onset of the crisis in the thirties, "Unemployment as an economic and political problem".

In after years he devoted his attention permanently to problems of fiscal policy and of public finance, small wonder for an economist with a legal bent. In 1940, just after our country's entrance into the war, he accordingly

obtained his degree on an important thesis, "Taxation for special purposes", prepared under the direction of Prof. Adriani. It is worth remarking that he made valuable international contacts even then, while collecting material for his thesis, and paid much attention to foreign taxation for special purposes.

Other important studies on financial problems appeared in due course: e.g. a publication about the administrative magistrate in cases of direct taxation and "Fiscal justice as an ethical moment in taxation". Even the briefest reference to the diversity of subjects he has treated shows that his erudition was too wide and his mind too open to be confined to a few limited fields.

It is this very need of a wide scope for his talents which inspired him to found the journal "Public Finance". It cannot have been by chance that this initiative came about shortly after the war when, after the restrictions and the isolation in the war years, he felt an irresistible urge towards scientific inquiry and expansion. He observed that in the Netherlands there was no journal that enabled one to get at the roots of public finance and in which current issues could be considered from an economic, juridical, historical, mathematical or general philosophical point of view. Extending his activity at once beyond the national frontiers, he restored the former international contacts and added many more to them. As a result, the journal started off with a list of editors and regular contributors of a very wide composition, both national and international.

And yet he wanted to widen its design still further. It looked as if here too the motto of his thesis had enthralled him, Bergson's words: „En vain nous poussons le vivant dans tel ou tel de nos cadres. Tous les cadres craquent. Ils sont trop étroits." Accordingly, the international character of the journal was strongly stressed and the staff of contributors extended to cover the whole world. Despite this continued widening and expansion, he saw to it with

unremitting care that the high level was maintained and, if possible, raised even further.

This periodical is Monod's brain child. Without derogating from the merits of anyone who has given of his best towards its prosperity, I feel justified in stating that it has been Monod before whose mind floated the ideal of an international journal of high scientific repute in the grim war years and just after, who has, in every respect, been the prime mover in realizing the plan and who never, while he had strength, ceased from maintaining it, and protecting and improving it.

Relatively few people know how much work Monod has done to achieve this purpose, how many cares he met with in doing so and how many sacrifices of all sorts he had to make.

Supported by great idealism, filled with a deep love of the journal in which this idealism had materialized, he persevered with unflagging energy. He lived to see the crowning glory of his labours in the consolidation of this periodical. And it is gratifying to state that Monod has thereby deserved well of the scientific study of public finance on the international plane. May the fruits of his activity be preserved for many years to come.

Her Majesty the Queen of the Netherland recognized his merits by appointing him an Officer of the Order of Orange-Nassau. It was also obvious that he should be elected President of the Netherlands branch of the International Fiscal Association, on whose board he had been for many years.

All those who knew him will have received the news of his decease with a shock. Above all, they will have realized that a man of uncommon gifts has passed away. Those with whom he came into contact, in whatever quality, were impressed with his charm of manner, characterized by a courtesy rare in these days. A courtesy which had nothing to do with external ceremony but which was a

direct reflection of the singular fineness of his being. He measured everything and everybody by the high standard by which he alone could be measured and I do not hesitate to say that the open-mindedness with which he approached others was moving.

On March 4 he was laid to his last rest in The Hague.

May he rest in peace.

VAN DEN BERGE.

En mémoire

de J. A. Monod de Froideville

M. Monod de Froideville, directeur et rédacteur en chef du „Public Finance", est décédé inopinément à Haarlem, le 27 février écoulé. Par la disparition de son père spirituel, la revue a subi la plus lourde perte qu'on puisse imaginer. On peut difficilement se faire à l'idée que la figure de proue de cette publication a disparu et que la revue devra poursuivre sa voie privée de ses soins et de ses efforts continuels.

Une personnalité aux aspects multiples, d'une grande richesse scientifique, nous a quitté.

Après des études préliminaires à l'Ecole supérieure de Commerce de l'époque, à Rotterdam, J. A. Monod de Froideville se fixa dans une des petites localités du pays. Poussé par son désir d'épanouissement scientifique, il subit, en 1933, dans le même établissement d'enseignement supérieur, l'examen de doctorat en sciences économiques, complété de certaines matières juridiques connexes.

Il fit paraître, déjà au temps de sa jeunesse, diverses publications relatives à des sujets très variés. Je me souviens d'une étude sur les ports, à l'époque où le développement des installations portuaires de Rotterdam éveillait sa particulière attention, d'une autre ayant pour sujet La signification économique de la navigation aérienne dans le trafic rapide moderne et, au début de la crise des années trente, d'une troisième intitulée Le chômage, question économique et politique.

Dans les années qui suivirent, son attention fut concentrée d'une manière permanente sur les questions d'ordre fiscal

et de finances publiques, ce qui ne saurait étonner de la part d'un économiste initié, de surcroît, à la discipline juridique.

En 1940, immédiatement après le déclanchement de la guerre, il obtint, sous la direction du prof. Adriani, le grade de docteur pour une thèse importante sur Les impôts affectés à des buts speciaux. Il est à noter que déjà à cette époque, pour les besoins de la préparation de sa dissertation, il avait noué des contacts internationaux intéressants et consacré beaucoup d'attention aux impôts à l'étranger.

Nous lui devons d'autres études de valeur dans le domaine financier, telles: une publication concernant la juridiction administrative en matière de contributions directes et La justice fiscale comme élément éthique dans le droit fiscal. Il ressort de la variété des sujets traités que l'esprit de cet homme d'études était trop large et trop ouvert pour se cantonner à quelques sujets limités.

C'est précisément ce besoin d'expansion qui l'a amené à fonder la revue „Finances publiques". Et ce n'est, certes, pas par hasard que cette initiative est née peu après la guerre, lorsque, après les restrictions et l'isolement dûs aus circonstances, son besoin d'approfondissement et d'extension en matière scientifique devint pour lui irrésistible. Il constate l'absence aux Pays-Bas d'une revue dans laquelle on aurait pu, en matière de finances publiques, aller jusqu'au fond des problèmes, dans laquelle aussi les questions d'actualité auraient pu être traitées du point de vue économique, juridique, historique, mathématique, voire philosophique. Il franchit rapidement les frontières de son pays, renoua les contacts internationaux établis antérieurement et en ajouta beaucoup d'autres. Rien d'étonnant, dès lors, si, dès le début de son existence, la revue put compter au sein de son comité de rédaction ou à titre de collaborateurs permanents, sur une large équipe de personnalités néerlandaises et étrangères.

Et cependant, il souhaitait un horizon encore plus large, comme poursuivi par ces mots de Bergson en exergue de

sa thèse de doctorat: „En vain nous poussons le vivant dans tel ou tel de nos cadres. Tous les cadres craquent. Ils sont trop étroits." Le caractère international de la revue fut encore accentué dans de notables proportions et l'équipe des collaborateurs put s'étendre au monde entier. Et, nonobstant cette extension, le souci de maintenir un niveau élevé et même de l'élever encore, reste intact.

Cette revue est l'enfant spirituel de Monod. Sans porter ombrage au mérite d'aucun de ceux qui, par leur collaboration, ont contribué à son épanouissement, je puis affirmer que c'est Monod qui, au long des dures années de guerre et immédiatement après, s'est fait le champion de l'idée d'une revue internationale de haut standing scientifique, qui en fut la cheville ouvrière et qui n'a ensuite rien négligé pour la maintenir, la défendre, l'améliorer.

Relativement peu de personnes savent la somme de travail que Monod a consacré à la poursuite de son but, combien de soucis cela lui a donnés, combien de sacrifices de toutes espèces cela a exigé de lui.

Mû par un grand idéalisme, poussé jusqu'à l'amour de la revue, où cet idéalisme avait trouvé son reflet dans la réalité, il a poursuivi sa route sans défaillance. Il a trouvé le couronnement de son travail dans la consolidation de cette publication. Et nous devons constater avec reconnaissance que Monod s'est acquis ainsi de grands mérites dans l'étude scientifique des finances publiques sur le plan international. Puisse son activité porter ses fruits durant de longues années.

Sa Majesté la Reine des Pays-Bas a reconnu ses mérites en le nommant officier de l'ordre d'Orange Nassau. Ajoutons qu'il fut élu Président de la section néerlandaise de l'International Fiscal Association dont il était, depuis plusieurs années déjà, administrateur.

Tous ceux qui l'ont connu auront ressenti un choc à la nouvelle de son décès. Avant tout, ils se seront rendu compte qu'un homme exceptionnel nous avait quitté. Ses rapports

avec ceux qu'il rencontrait, à quelque titre que ce soit, se distinguaient toujours par une courtoisie presque inconnue de nos jours. Une courtoisie qui n'était pas seulement du domaine des convenances, mais qui était le reflet de la rare finesse de son être. Il mesurait tout et tous suivant la mesure selon laquelle lui seul pouvait être mesuré et je n'hésite pas à dire que la franchise avec laquelle il approchait autrui était vraiment émouvante.

Le 4 mars courant, il fut porté en terre à La Haye.

Qu'il repose en paix!

VAN DEN BERGE.

THE TAXATION OF THE TRANSFERS AND PROPOSED REALIGNMENT OF TAX POLICIES AND PROCEDURES WITHIN THE FRAMEWORK OF THE "COMMON MARKET"

by P. B. DERTILIS

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The problem of setting up a "Common European Market" should oubtless be considered, in addition to all other aspects, also from he taxing viewpoint. Indeed, not only the differential of the tax ressures upon the overall economic activities and generally on he overall economy of the States, which are to join in the "Common uropean Market", but, even, also the taxing technique in such tates — that is, their tax systems — are subjects, interalia, which re expected to contribute and to affect the successful outcome of ne "Common European Market" to help promote the economies f its state-members. For this reason, it is particularly imperative o examine the tax pressure of the states and their taxing technique vihin the framework of the problems of the Common European Market, with a view to achieve the best possible harmonization nd adjustment of these two particularly important problems of axation. To this effect, it is necessary to make a comparative nvestigation [1]) of the tax systems applied by the various states vhich are to participate in the said "Common Market". Of the axes which make up the tax systems of the states, in our opinion seems more imperative that special consideration should be given o the transfer taxes and, of these taxes, to the turnover tax. As matter of fact, tariff issues have already been dealt with by the nterested states and they have persistently sought to reconcile neir dissident views as much as possible. Besides, the policies and rocedures applied by the various States in respect of the taxation ssessed upon the income and the capital have realized an approach

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1) It should be stressed that it is not on easy task to make a comparison of ne tax charges of the States. See relative problem: *P. B. Dertilis*, System of ublic Economics, Athens 1945, Volume A', p.p. 399 and next.

at a result of the tendency of the States concerned to introduce the component type of taxation on the income, which is usually called as a type of unique tax. Moreover, the taxes imposed on transfers give rise to lots of problems, and in point of fact such handled problems are not irrelevant to the problem of the incurrence of taxation charges, since, as is known, such taxes, under a system of free competition are more easily incorporated into the prices, and they therefore affect rather appreciably the movement of the goods within the framework of the free market. The limited bounds of this report do not permit us to set forth extensively our points of view, both with respect to the recommended amendments and modifications to be made to the existing practices of assessing such taxes and especially the turnover tax within the framework of the "European Market" [2]).

Our general views pertaining to the above proposed amendments have been expounded more or less in the pertinent chapters of our study which is to be published in the periodical "Archives Internationales de Finances Publiques".

And firstly, briefly outlined a new some of these views lead to the conclusion that the exceptions from the taxation, as established in this country, are not aimed at promoting the progress.

On the basis of the instituted research, there has been also ascertained the phenomenon of "double and even multiple taxation". The Greek legislator has designed and drawn up into a concrete form the entire system of taxation under the pressure of the major requirements of the Government Budget. And from this reason, neither the phenomenon of the "double" or "multiple" taxation is expected to be averted nor even any abatements are to be established to further the development of the country's economy. Generally speaking, the high of the price levels is actually affected. As a result of such drawbacks, the taxes get embodied into the prices and exert inflationery pressures upon the economy of the underdeveloped countries. Furthermore, the taxing system too is not based on uniform principles. Thus, while the legislator originally aimed at enacting a system of turnover tax, doing his best not to make it complex, in the process of the time he broadened the system of such taxation and rendered it rather incosistent and

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[2]) In connection with the turnover tax, se reports submitted to I.F.A. congress, Cahiers de droit fiscal international, Congrès de Paris - Sept. 21-24 1953.

involved. Assuredly, the great requirements of the Government Budget make up an obstacle in effecting radical changes and modifications toward this direction. At any rate, however difficult may appear to be the implementation of such reformatory measures, in our opinion, it becomes nonetheless feasible to bring into effect such reforms, which would surely help promote the progress of the economy, the contents of wich are outlined in our research, which is to be published, as referred to above, in the magazine "Archives Internationales de Finances Publiques", dealing specifically with the existing policies and procedures of taxation. It is further imperative, as a major reason, to reform into a uniform text the transfer taxes, the codification of the respective provisions relating to the taxes in question and the pursuance and determination of the relevant terminology on the taxing systems of the various states, in such a way as to make it easier a comparative appraisal of the taxations. The simplification of the system of taxes should also be sought in the most efficient way.

It is further necessitated to initiate proper steps to redigest such taxes into the taxing system of Greece and probably of the other states as well. The necessity to codify same is further deemed to be an exigency for us for the reason of making the tax legislation conformable and consistent with the standing "Constitution" of January 1 1952. Greece has been applying equal tax treatment towards all foreigners in Greece. She reserves, even, a more favorable tax treatment for the capital brought into the country from abroad [3]). Besides, a quite equal tax treatment has been established in accordance with the "Annecy Agreement", and Greece applies it for commodities imported from abroad in respect of the turnover tax, affecting similar goods produced in Greece.

However, a uniform tax system cannot be enacted, at least immediately, for all countries which participate in the "Common European Market".

Such a reform stumbles firstly upon the requirements of the Budget of the various states, which are of differential grades and pressures in the countries in question.

The same reformatory measures are still hindered due to the particular conditions of the economy of the said states. It is enough for us to take into account the fact that many states, such

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[3]) Problem of Mr. *P. B. Dertilis;* the international double taxation - Athens 1932.

as Greece, reserve a preferential treatment, in connection with the turnover tax, for enterprises which are operating in certain areas, which are relatively less economically developed. If then it is expedient to apply a preferential treatment for territorial areas of the same national economy, as it happens with Greece, for instance, for units of economies working outside the district of Athens areas, or in Italy, such expediency appears, with still stronger reason, to be imperative within the operation of the system of the "Common European Market", to ensure positively the required development conditions of the economy of all the states-members of the "European Common Market".

But, generally speaking, it can ben observed that in the underdeveloped countries' economies a differential tax system is brought into adjustment.

We therefore feel that the taxation should be milder in the underdeveloped and dependent economies, as a counterbalance of the advantageous position of the most prevalent and most promoted economies [4]).

It is, nevertheless, known that the technical difficulties and the psychological factors constitute a very strong obstacle for a given tax reform to be attained in the dependent economies. A uniform tax system calls for equal tax charges, according to the requirements of the Government Budget and especially equal economic possibilities and the same terms of psychological and economic stability. Should we not take into consideration these factors, the unity of the economy of the states-members of the European Common Market will be upset at the expense of the less developed economies.

But the problems of the disproportionate incurrence of taxes as a result of the differential grades of competitive capacity of the economies-members of the "Common Market" should call the necessary attention, for the successful promotion and common progress of the members-economies of the European community [5]).

Likewise, nobody should ignore the quasi-state taxations and the

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[4]) Relative problem: *P. B. Dertilis,* nota sulla Politica fiscale nei paes sottosviluppati, Archivio finanziario, Padova Vol. VI 1957 Page 45 and next.

[5]) In connection with the raised problems of taxation within the international relations see studies such as *Bartholoni,* Revue d'Economie Politique, 1951, p.p. 945 and next *M. Byé,* Revue d'Economie Politique, 1952, p.p. 225 and next *R. Courtin,* there 1952, p.p. 240 and next. Compare the recently published

subsidy grants as well as the security prices in carrying on the investigation of the overall problem of the common market. Because the security prices too and the subsidy grants cover taxation; and the tax incurrence upsets the tax equilibrium. Furthermore, thirdly, the abrupt application of tax reforms comes in contrast with the habits of the tax-payers. From this point of view too, more disadvantageous appears to be the position of the tax-payers of the underdeveloped countries. However, it is known how sensitive is the economy of these countries which according to the expression of Professor Fr. Perroux are "dependent economies" (economies dominées), sustaining the dependence of the "prédominant economies". These last economies can take advantage, in an automatic manner, of powers of dependent economies. It is therefore just the predominant economies to be subjected to tax sacrifices for the sake of the unity of the economy of the "Common Market" and the normal and general progress of the economy of the members of the common market [6]). In our opinion, it is more than imperative to establish a joint tax capital, which will be intended to make up for losses in taxes of even other losses to which necessarily are to be subjected the dependent economies in the carrying on of the competition of these goods against the goods of predominant economies otherwise, the economic progress in the members of the common market is not commensurate and equal. The most economically developed countries, from many reasons, find themselves in an advantageous position as against the economies dependent upon them. The progress of the time will lead to the mitigation of the tax favors on behalf of the underdeveloped economies and will finally result in a best possible streamlining of the tax systems of all the tax systems of all the states-members of the "Common

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works of professor C. Cosciani, Problemi fiscali del Mercato Comune, Milano, 1958, and also a study of the same author, Problèmes fiscaux de la communauté économique européenne in "Public Finance" (international quarterly Journal) No. 3/1958. We consider that the equilibrium of the balance of payments is a result of the influence of the income level and not of the price level as the classical theory suggests. For this reason we think that the principle of taxation, in the country of origin is interesting for the underdeveloped countries, members of the Common European Market. The tax on consumption should be livied in applying the principle of taxing in the country of destination or consumption.

[6]) See relatively *P. B. Dertilis:* L'influences et les avantages des conventions fiscales, Congrés de l'IFA de Rome 1948.

Market", especially in the transfer taxes. Indeed, it is easier to effect a streamlining in the direct taxes. But, however less obstacles are raised in handling a streamlining of such tax systems, in this respect too and also in the field of the other taxes as well, this task of assuring a best possible streamlining of the overall tax systems of the state-members of the common market appears to be neither easy nor a simple one.

Surely it is known that in the case of applying taxes on the income, the applicable tax systems established in the various states veer in the direction of the component type of taxation of the income [7]). In this connection too, a headway is made towards the streamlining of the tax systems. But still, big differences are kept up in the systems of imposing taxes on the income, such as those connected with the untaxed limit of maintenance, the abatements for family encumbrances, the basis and the contents of the family income and especially with the technique of the taxation and the deviations from the principle of the taxation of the family income.

The enhancing of the economy of the presently underdeveloped areas will necessarily lead to the fullest possible streamlining of the taxing systems of the states and on the taxation of the income.

In order to assure a streamlining of the relevant taxation systems applied by the states-members of the common market, as set forth above in the beginning of this article, it is imperative to obtain a sure knowledge not only of the taxation systems of the states-members of the "Common Market", but also to make a detailed inquiry into the expenditures of the Government Budgets of these states. Should the economy aim at economic, or other purposes [8])

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[7]) For reference to this subject see *Fr. Neumark,* Theorie und Praxis der modernen Einkommensbesteuerung, Bern 1949, *H. Laufenburger,* Revue de Science et de Législation financières 1948, p.p. 267 and next. From this point of view one can admit that the last tax reformation in Greece, which was put into effect by Law 3223/1955 serves the approaching of the tax systems. For reference to this subject see *P. B. Dertilis,* „die Reform der Griechischen Einkommensbesteuerung, Finanzarachiv, Bund 17 Heft 3, year 1957. In connection with the taxation of companies incorporated in the various states, see *P. B. Dertilis* Archives Internationales des Finances Publiques, Paris 1954 and our study therein p.p. 245 and next.

[8]) Problem dealt with by *P. B. Dertilis,* La Theoria Moderna degli scopi extrafiscali dellimposta in Rivista di Politica Economica, June 1955, and references therein.

it is however true that there still remains as a major and basic objective of the taxation the task of covering the expenditures of the Budget. Hence, it is not possible to seek to obtain unilateral solutions for the states, that is, to seek only taxing reforms in states-members of the "Common Market" without bearing in mind the shaped conditions in the Budget of such expenditures. To this effect, in our opinion, it is urgently necessitated to establish a Permanent Taxing Committee to consist of representatives, on equal terms of all the "Common Market"-participating states. Among the tasks of the said Committee will be not only to inquire into the taxing systems of the "Common Market"-participating states and their Budgets, but also the administration of the Joint Tax Capital, as referred to above, with the objective of compensating losses to be sustained the weaker economies of the states-members of the "Common-Market". Another task of the said Tax Committee of the Common European Market will be to work out international tax contracts, aimed at enacting progressively similar tax principles in the tax systems of the states-members of the Common European Market in connection with their Budgets, and the particular conditions of their economy.

As a matter of fact, in the past, under the auspices of the formerly established League of Nations, types of tax contracts had been formulated to be used as models of tax contracts to eliminate the double taxation. Nobody of course can call in question the fact that business had been useful in many respects. But, it aimed more at the conditions of the predominant economies (Economies Dominantes) or maintained almost solely a theoretic character.

Therefore, correctly was pointed out by the recently died Professor B. Griziotti in an intervention of his at the Congress of the "Institut International de Finances Publiques" held in Frankfurt in September 1953, the necessity for the rich states to make sacrifices in favor of the poor economies [9]) of what has been outlined above it becomes clearly obvious that the task of effecting a best possible streamlining of the tax systems of the states-members of the Common European Market is neither simple nor easy. But we believe that in the taxing field too it is possible to broaden the

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[9]) See particularly „Travaux" Institute, Congrès de Frankfurt, 1953, of this communications handled therein under the title „Aspects Financiers et Fiscaux de l'Intégration Economique Internationale".

cooperation of the European States; provided only we are not to be led to solutions which might further increase the advantageous state of the predominant economies.

Assuredly, the "Common Market" regime is not implied without the freedom of business therein. In our opinion, the prevalence of this Common Market and of the principle of the freedom of business are not merely desirable, but exists within the system of it. Yet, in our opinion, and towards this direction at least during the first years of the operation of the "Common Market", rather advantageous appears to be the position of the predominant economies. Indeed, the utilization of labor hands, which are plentiful in the dependent economies, in enterprises of the most developed economies is impeded by lots of obstacles. Conversely, much easier seems to be the utilization of labor elements by the developed economy in the underdeveloped economy. Hence, from all these considerations, as set forth above, we are led to the conclusion that the problem of the operation of the European Common Market should be handled with prudence.

LA TAXATION DES AFFAIRES ET L'ALIGNEMENT DES POLITIQUES ET DES PROCEDURES DE TAXATION DANS LE CADRE DU MARCHE COMMUN

par P. B. DERTILIS

RÉSUMÉ

Le problème de la fondation d'un Marché Commun européen devrait être examiné, entre autres, du point de vue fiscal. A cet effet il est nécessaire de faire une étude comparée des systèmes fiscaux des différents pays qui doivent participer au Marché Commun. Parmi les impôts qui forment les systèmes fiscaux de ces pays, on devrait souligner l'importance des taxes sur les transferts et spécialement des taxes sur les chiffres d'affaires.

Il est nécessaire de procéder aux réformes qui encourageraient les progrès économiques des pays sous-développés. En effet, un système fiscal uniforme ne droit pas être envisagé pour tous les pays qui doivent participer au Marché Commun. Une telle réforme se heurte en premier lieu aux exigences budgétaires des divers pays. La disparité des prix qui constitue une autre entrave ne peut être que défavorablement influencée par la diversité fiscale. Et, généralement, ces réformes sont encore entravées par les conditions particulières de l'économie des dits pays. Mais d'une manière générale dans les pays insuffisamment développés un système fiscal différentiel s'impose. Dès lors la taxation devrait être moins lourde dans les pays insuffisamment développés et dépendants, comme contre-partie de la position plus avantageuse des pays plus développés ou dominants. Mais on devrait porter attention au problème de la disproportion d'imposition en fonction du degré différent de capacité concurrentielle des économies-membres du Marché Commun.

De plus les modifications brusques d'imposition se heurtent aux habitudes des contribuables. Il est indispensable de former un fonds qui serait destiné à faire face aux pertes dues à la diminution de rendement des impôts ou à d'autres causes, que les pays insuffisamment développés pourraient subir dans leur concurrence avec les économies dominantes. Le temps devra conduire à un amoindrissement des privilèges institués en faveur des pays insuffisamment développés et il devra finalement en résulter un alignement des systèmes fiscaux

de tous les Etats qui seront membres du Marché Commun, surtout des taxes sur les transferts.

Dans le but d'assurer cet alignement, il est nécessaire non seulement d'obtenir une connaissance profonde des systèmes fiscaux des Etats-membres, mais aussi de mener une enquête détaillée sur la question des dépenses budgétaires. A cet effet il est conseillé d'instituer une commission permanente sur les questions fiscales et budgétaires, commission groupant tous les Etats qui seront membres du Marché Commun.

BUDGET ET POLITIQUE ECONOMIQUE
LE BUDGET FRANCAIS DE 1959

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Selon la dernière définition officielle française le budget est „constitué par l'ensemble des comptes qui décrivent, pour une année civile, toutes les ressources et toutes les charges permanentes de l'Etat" ressources et charges dont „les lois de finances déterminent la nature, le montant et l'affectation" [1]). Mais la nécessaire précision et la sécheresse de ces termes juridiques ne révèlent pas l'extrême importance que, en France comme ailleurs, l'ensemble des fonds „filtrés" par le seul pouvoir central revêt pour la vie du pays. Budget et Trésor ont manié en 1958: 5.531 milliards de Frs sur un revenu national d'environ 21.000 milliards soit plus du quart de ce revenu; et encore certains fonds publics leur ont-ils échappé.

La masse et la diffusion des fonds qu'il prélève comme de ceux qu'il redistribue par les canaux monétaires, dans les secteurs économiques et à travers les groupes sociaux, font nécessairement du budget l'expression de la politique économique et sociale du gouvernement, et même le reflet de sa politique générale.

Mais une politique doit s'appuyer sur des méthodes d'analyse et des techniques qui sont des instruments de sa réalisation; leur élaboration et leur perfectionnement sont des oeuvres en perpétuel devenir et, heureusement pour elles en France, elles sont assurées de la continuité des services administratifs en face de ce qu'a été depuis la libération la fréquente mutation des personnages politiques. Toutefois, en dépit des changements de personnes, la France a, depuis une quinzaine d'années, suivi une politique économique dont, en face de la réforme qui vient de s'opérer et après élimination de ce qu'on pourrait appeler les „fluctuations mineures", on peut dire qu'elle a présenté une certaine constance : constance dans la facilité et l'acceptation inconsidérée de l'inflation et de l'aide extérieure,

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1) Cf. art. 1 et 16 de l'ordonnance no. 59-2 du 2 Janvier 1959 portant loi organique relative aux lois de finance J.O. Lois et Décrets - 2/3 janvier 1959.

diront certains, constance dans la recherche et la réussite de l'expansion, diront d'autres.

Quel que soit le jugement que l'on peut porter sur elle, cette ligne politique a comporté l'acceptation ou la recherche — suivant la tendance politique des gouvernants — d'une large intervention de l'Etat, soutenant certaines activités, en dirigeant ou en infléchissant d'autres, en assumant lui-même d'autres encore. Au cours de cette période les principes budgétaires et de Trésorerie ainsi que les méthodes d'analyse économico-financière ont profondément évolué et la brève étude de quelques étapes de cette évolution nous paraît nécessaire pour porter une juste appréciation sur la valeur de l'instrument de politique économique que constitue le budget français, et la place qu'occupe celui de 1959 dans la nouvelle politique française.

I. *Evolution budgétaire en France*

L'évolution budgétaire française au cours des derniers lustres nous paraît dominée par deux tendances apparemment contradictoires et cependant explicables et même conciliables : d'une part un souci de totalisation, d'autre part un souci de différenciation.

Le souci de totalisation se rattache au courant qui, depuis Keynes, a porté les quantités globales au premier plan des recherches économiques. En comptabilité nationale, l'Etat est l'une des quatre grandes subdivisions, à côté des entreprises, des particuliers et des relations avec l'extérieur. L'appréciation exacte des conséquences économiques et sociales de son interférence dans la vie du pays nécessite en premier lieu la connaissance du volume des fonds qu'il manie. Le souci de globalité a d'ailleurs trouvé un appui dans les vieux principes budgétaires d'unité et d'universalité, nés de souci de clarté et de sincérité dignes d'une bonne administration.

Mais la différenciation apparaît tout aussi indispensable au budget d'un Etat moderne. En effet, la multiplicité des interventions d'un tel Etat ne permet pas à tous ses actes financiers de se couler dans un même moule; d'autant plus que les cadres classiques ont une certaine rigidité héritée d'une longue tradition du maniement des deniers publics. Or le formalisme — notamment le strict respect des principes d'unité et d'universalité — gêne l'exercice d'activités économiques et commerciales, qui ne sont plus étrangères à l'Etat.

C'est ainsi que durant la guerre et l'immédiat après-guerre qui ont été des périodes des multiplication des interventions de l'Etat,

on a pu assister à un véritable démembrement budgétaire au profit notamment de comptes spéciaux du Trésor, dont le cadre est par nécessité beaucoup plus souple que celui du budget. L'Inventaire Schuman en 1946 a dénoncé ces abus et les lois de 1948 et 1949 ont réintégré dans le budget une partie de ces comptes et établi, pour ceux qui étaient maintenus, un régime qui conciliait la souplesse indispensable à leur fonctionnement avec les garanties qui doivent demeurer attachées au maniement de fonds publics. Depuis lors, ce régime a fait ses preuves et bénéficié de quelques améliorations. On retrouve dans les successives codifications budgétaires — décret-loi organique du 19 Juin 1956, et ordonnance du 2 Janvier 1959 — les comptes spéciaux qui sont devenus — à côté des budgets annexes nés jadis de soucis similaires — d'utiles instruments de finances publiques. Ils satisfont les nécessités de différenciation, mais sans sacrifier tout à fait la totalisation, puisque la loi de finances fixe un maximum à leur découvert.

Une autre manifestation de l'interventionnisme économique et social de l'Etat a été l'accroissement de ses investissements. Reconstruction, modernisation, équipement sont des impératifs qui expliquent qu'en 1950 le volume total des investissements sur fonds publics (non compris la reconstruction et l'équipement des services de l'Etat) soit au coefficient 20 par rapport à 1938 [2]) alors que la masse budgétaire de 1950 n'était supérieure à celle de 1938 que de 12 %.

Or ce genre de dépense est d'une tout autre nature que les dépenses de fonctionnement des services. Et reprenant une distinction auparavant basée sur le critère imprécis de différence de périodicité des dépenses, l'Inventaire Schuman se prononça en faveur de la création d'un budget extraordinaire regroupant les dépenses d'investissement, ainsi détachées du budget ordinaire, et comprenant en ressources les recettes autres que fiscales: emprunt, aide extérieure, liquidation d'avoirs, etc.

Ainsi donc, au souci de classer et d'analyser distinctement les dépenses ayant des effets économiques et sociaux divers, s'ajoutait un souci de correspondance entre catégories distinctes de recettes et dépenses, et surtout un souci politique de faire ressortir l'équilibre du budget ordinaire. Ce dernier, de par sa composition, constituerait

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[2]) Cf. Le Budget de la France en 1950 - Ministère du Budget-Bureau d'Etudes - P. 9.

à lui seul le continuateur des budgets classiques; son équilibre devrait donc suffire à témoigner d'une bonne gestion financière conforme aux principes orthodoxes. La pratique budgétaire française, sensible à cette thèse, créa, en 1947, un „budget de reconstruction et d'équipement" qui ne regroupait d'ailleurs pas toutes les dépenses publiques d'investissements. Mais la doctrine fit valoir de sérieuses raisons contre la validité des critères sur lesquels se fonde la dualité budgétaire: imprécision des arguments de rentabilité (directe) ou de productivité (indirecte) justifiant le recours à l'emprunt pour les dépenses autres que courantes; effacement de frontières bien précises entre les catégories de ressources, impôt, emprunt et moyens de trésorerie [3]).

L'unité budgétaire fut restaurée en 1954, sans que soient sacrifiées d'utiles différenciations. Celles-ci existent, depuis lors; à l'intérieur du budget sont, en effet, distinguées: dépenses ordinaires, et dépenses en capital; subdivision qui, conjuguée avec celle entre dépenses civiles et dépenses militaires, partage en quatre grandes masses les dépenses du budget général auxquelles il convient d'adjoindre celles à effectuer sur ressources affectées pour obtenir l'ensemble des charges budgétaires.

Les inconvénients de la différenciation sont supprimés à partir du moment où, réalisée à l'intérieur du budget, elle n'implique plus correspondance entre catégories de recettes et de dépenses, ni surtout limitation de dépenses au produit de certaines ressources. Elle fut donc poussée plus loin que les subdivisions primaires rappelées plus haut et les dépenses des derniers budgets français ont été réparties en 8 titres, dont, pour les investissements:

le titre V: investissements exécutés par l'Etat;

le titre VI: investissements exécutés avec le concours de l'Etat, subdivisé lui-même en:

A - Subventions et participations;

B - Prêts et avances

et le titre VII: Réparations de dommages de guerre.

Dans les titres V et VI - ainsi que, dans une moindre mesure, dans les titres III „Moyens de services" et VIII „Dépenses sur ressources affectées" et les budgets annexes — une différenciation de régime est introduite entre les crédits de paiement annuels et les autorisations de programme, crédits d'engagement valables sans

[3]) Cf. H. Laufenburger - Finances comparées - 2eme ed. Sirey - Paris - 1951. p. 38 et s.

limitation de durée; ces autorisations pallient en partie les graves inconvénients suscités par l'application aux dépenses d'investissement du principe de l'annualité [4]). Elles sont indispensables au maintien de ces dépenses dans le cadre budgétaire. Elles constituent un procédé de différenciation nécessaire pour la réalisation de la totalisation.

A côté de ces subdivisions légales, premiers échelons de la spécialité budgétaire et cadres dans lesquels s'exécute le budget, les services du Ministère des Finances ont, ces dernières années, procédé à des regroupements fort intéressants des dépenses publiques. Nous mentionnerons les deux plus récentes études de cet ordre: le budget fonctionnel de l'Etat pour 1958 [5]) et le passage des données budgétaires à la comptabilité nationale [6]). On ne saurait, à notre sens, trop insister sur l'opportunité et la valeur de telles recherches. Elles fournissent les éléments indispensables aux études d'économie financière et à tout essai d'appréciation des effets économiques et sociaux de l'action financière de l'Etat. Par les regroupements de dépenses qu'elles opèrent sous des angles divers et qui présentent d'incontestables significations économiques elles satisfont aux nécessités de différenciation. Par le fait que, le plus souvent, elles incluent non seulement les masses budgétaires mais également les opérations réalisées par des organismes dont l'existence s'explique par des raisons historiques ou politiques, mais dont l'activité constitue un démembrement des finances de l'Etat (comptes spéciaux, fonds de développement, caisses autonomes, etc.), elles satisfont à la nécessité de totalisation.

De telles voies de recherches sont, nous semble-t-il, beaucoup plus riches en enseignements et en promesses de développement qu'un autre instrument d'analyse économique et financière qui a cependant connu en France, au cours de ces dernières années, une singulière fortune, nous voulons parler de la notion d'impasse. L'impasse est la charge nette supportée par le Trésor du fait de l'exécu-

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[4]) Cf. R. Jacomet „Le budget considéré comme l'instrument financier des plans économiques de longue durée" in Annales de Finances publiques no. VI-VII Paris Sirey 1947 et notre étude „Techniques financières et programmes de développement" in Annales de la Faculté de Droit d'Alger, 1956.

[5]) Cf. Statistiques et Etudes financières no. 111 - mars 1958 Paris-Imprimerie Nationale.

[6]) Cf. „Rapport sur les comptes de la Nation de l'année 1957" note 2. Paris-Imprimerie Nationale 1958.

tion de la loi de finances [7]). Elle marque donc un progrès en matière de totalisation sur l'ancienne notion de déficit budgétaire, puisque s'ajoutent à la différence — positive ou négative — entre dépenses budgétaires et recettes fiscales et assimilées, les charges propres du Trésor. Représentative de l'effort que doit, chaque année, accomplir cette Direction pour couvrir les charges publiques, elle implique l'élaboration d'une ou plusieurs hypothèses de ressources. Mais adoptée par parlementaires et journalistes, l'impasse devint rapidement un chiffre mystique, critère de la gestion de l'Etat, pierre de touche de la politique financière. Elle fut haussée au rang d'instrument type de mesure de l'action de l'Etat sur la conjoncture économique. Or, pour jouer efficacement un tel rôle, il semble qu'il lui manque précisément les qualités de différenciation. L'impasse est une notion globale et, qui plus est, un solde de masses hétérogènes. Les critiques dirimantes à notre avis [8]) qu'on lui a adressées sur le plan de l'analyse économique, ramènent l'impasse au juste rang d'instrument permettant tout au plus de dégager une tendance possible ou probable.

Mais, même en tant qu'instrument d'analyse financière, l'impasse a perdu une partie de la valeur qu'on lui avait primitivement attribuée; elle tend à être, sinon remplacée, du moins complétée par la notion d'endettement net de l'Etat; si cet endettement est calculé d'après l'ensemble des créances et dettes de l'Etat, il correspondra à une catégorie économique précise: le solde du compte d'affectation de l'Etat tel qu'il ressort de la comptabilité nationale; et l'on ne peut que souhaiter l'établissement de ce nouveau pont entre économie et finances publiques.

La dernière étape de l'évolution du budget français se situe au début de l'année 1959 et est marquée par trois documents importants: la loi de finances pour 1959 et la loi organique relative aux lois de finances, d'une part, prises l'une et l'autre sous forme d'ordonnances en vertu des pouvoirs spéciaux du gouvernement et successivement parues au Journal Officiel fin Décembre-début Jan-

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[7]) Cf. Statistiques et Etudes financières no. 104 - Août 1957 P. 889.

[8]) Cf. notamment „La signification financière et économique de l'impasse" in „Rapport sur les comptes de la Nation de l'année 1957" op. cité p. 100, et s. et „Aspect financiers et économiques de la notion d'impasse". par J. L. Vauzanges in Revue de Science financière 1958 no. 3.

er, d'autre part, le Rapport sur la situation financière, dit Rapport ueff [9]) rendu public vers le 10 Janvier.

Qu'apporte cette étape au double point de vue de la totalisation de la différenciation en matière de finances publiques?

On y relève d'abord un souci certain et très louable de totalisation ar la réintégration dans le budget de dépenses et recettes qui, pour verses raisons, n'y étaient pas incluses, bien qu'elles eussent dû giquement y figurer. Ainsi, l'article 77 de la loi de finances a pprimé la Caisse autonome d'Amortissement et les ressources qui i étaient affectées feront, „à compter du Ier Janvier 1959, retour budget de l'Etat", tandis que le Trésor supportera les charges amortissement en capital de la dette publique.

Par ailleurs, certaines dépenses d'investissement du ressort du cteur public, tels les prêts à moyen terme à la construction et aux ntreprises nationalisées, au lieu d'être financées par le réescompte effets à la Banque de France, le seront désormais par le Trésor, s dépenses y afférentes figurant dans la loi de finances de 1959. es mesures de bon ordre financier ont été suggérées par le Rapport ueff. Elles sont assurées d'être maintenues, sinon même renforcées étendues. L'ordonnance du 2 Janvier relative aux lois de finances siste à plusieurs reprises sur l'inclusion dans le budget de *toutes s ressources* et *charges permanentes* de l'Etat.

Mais les mesures déjà prises impliquent l'emploi de grandes pré- utions dans la comparaison entre masses du budget et du Trésor our 1959 et masses des années précédentes. Elles expliquent pour artie l'accroissement de volume des charges et ressources visées ans la loi de finances, accroissement qu'il ne faut pas attribuer à ne poussée d'interventionnisme. Et il convient d'en tenir compte our l'estimation de l'augmentation réelle des dépenses publiques investissement; cette augmentation est certaine, mais moins forte ue ne le ferait supposer la comparaison des seuls chiffres budgé- aires, même après correction pour hausses de prix.

Une nouvelle différenciation née il y a quelque temps a été onsacrée, non par le budget de 1959, mais par l'ordonnance qui

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[9]) Un comité formé le 30 Septembre avait été chargé de faire un rapport sur nsemble du problème financier français, rapport d'information et de conseil qui vait guider le gouvernement dans le choix d'une politique économique et nancière et dans l'élaboration du budget de 1959. Ce comité avait été placé us la présidence de M. Rueff et son Rapport publié par l'Imprimerie Nationale t généralement désigné sous le nom de „Rapport Rueff".

régira la présentation des budgets ultérieurs; il s'agit de la distinction entre les dépenses définitives et les dépenses qui ne le sont pas, c'est-à-dire les prêts et avances de l'Etat, susceptibles d'être remboursés à plus ou moins long terme. L'ordonnance du 2 Janvier prévoit expressément dans les ressources permanentes de l'Etat les remboursements de prêts et avances (art. 3) et dans les charges permanentes les prêts et avances (art. 6). Cette nouvelle catégorie de dépenses se subdivisera en 4 titres: prêts du fonds de développement économique et social, prêts intéressant le logement, prêts divers consentis par l'Etat et avances de l'Etat. Il s'agit donc d'une distinction intérieure au budget comme l'est depuis 1954 celle (d'ailleurs maintenue par l'ordonnance) entre dépenses ordinaires et dépenses en capital. Se fondant sur un critère juridique — la conclusion d'un contrat de prêt — cette nouvelle distinction ne paraît pas devoir donner lieu à contestations, comme ce fut le cas pour les critères, d'ordre économique, de rentabilité ou de productivité. Mais certains prêts de l'Etat ne peuvent être assimilés à des prêts privés. Leurs conditions d'éloignement du terme et de faiblesse des taux d'intérêt en font parfois des subventions déguisées et pour les analyses économiques il faut rechercher leur véritable nature au-delà du cadre juridique.

Mais la trompeuse assurance que peut donner ce critère de distinction serait beaucoup plus redoutable s'il servait, comme le suggère le Rapport Rueff, à une scission du budget en deux sections : budget des dépenses et des recettes publiques et budget des prêts rentables; ce qui implique distinction entre catégories de recettes : recettes fiscales et assimilées (inconditionnelles) pour les dépenses inconditionnelles de la première section, qu'elles soient courantes ou d'investissement; recettes d'emprunt pour les dépenses de prêts et d'avances. Et ces dernières dépenses se distinguent des dépenses d'investissement de la première section par le fait qu'elles sont „rentables" alors que les autres ont trait à „des investissements non rentables qui, par leur objet, participent à la nature des dépenses publiques et ne pourraient, en l'absence d'une intervention de l'Etat, être couverts par des émissions sur le marché". Il s'agit donc d'une conception privée de la rentabilité puisqu'elle est basée sur les décisions réelles ou supposées du marché financier.

On conçoit dès lors que le Trésor soit, pour ces prêts et avances „rentables" de l'Etat, considéré comme un intermédiaire, „presque comme un Banquier prêt à faciliter, lorsque les bénéficiaires ne peu-

rent intervenir commodément sur le marché, les opérations de crédit nécessaires à leur financement". Et l'on conçoit également que le Rapport Rueff puisse, sans grand scrupule, assigner à ce genre de dépenses publiques une limite stricte: „Il est indispensable, affirme-t-il, que le budget des prêts soit en toutes circonstances inférieur au volume des emprunts susceptibles d'être placés sur le marché. Le Comité voit dans cette exigence la clé de l'assainissement financier". Nous expliquerons et discuterons plus loin les prémisses économiques qui expliquent la relation étroite entre cette exigence et l'assainissement financier français, mais, dès à présent, sur le seul plan de l'analyse financière, il est permis de formuler des réserves à l'égard de cette position.

D'une part, ce que le Rapport Rueff désigne par les „dépenses inconditionnelles de l'Etat" (à savoir les dépenses courantes et les investissements non rentables de la première section du budget) excède-t-il pas la capacité fiscale du pays? Répondre par la négative implique, à notre sens, ou bien un grand optimisme sur les capacités de „rentabilité" des investissements de l'Etat, ou bien acceptation d'une politique fiscale particulièrement sévère [10]).

D'autre part, il apparaît bien difficile d'appliquer à des dépenses publiques cette sorte de couperet que constitue le montant limite de l'épargne acceptant de se placer en titres publics. Ceci aboutirait à faire dépendre d'un facteur sensible et réputé pour son instabilité, des opérations qui peuvent être essentielles pour la vie économique du pays et pour lesquelles la continuité de l'exécution est indispensable. La réalisation de travaux d'investissement porte sur plusieurs années, 3 à 5 en moyenne. Le manque absolu d'élasticité pour leurs moyens de financement peut se révéler dommageable; un navire, par exemple, n'a d'utilité qu'une fois terminé; une chaîne de fabrication ne doit pas être interrompue et son simple ralentissement peut occasionner une forte hausse des prix de revient.

Nous rappelons et soulignons que le droit positif n'a pas suivi sur ce point le Rapport Rueff: la nouvelle subdivision budgétaire sera intérieure aux futurs budgets et sans correspondance avec telle ou telle catégorie de recettes, ce qui évite les inconvénients signalés. Quant à la loi de finances de 1959 qui n'a pas encore adopté la nouvelle subdivision budgétaire, elle prescrit, dans son article 82,

[10]) Remarquons en passant que cette nouvelle forme de la dualité budgétaire serait exposée au reproche inverse du reproche de facilité adressé jadis à la division entre budget ordinaire et budget extraordinaire.

suivant la formule habituelle, que „les charges résultant de l'excédent de l'ensemble des charges sur les ressources prévues par la présente ordonnance ... seront couvertes à l'aide des ressources d'emprunts et de trésorerie".

Mais la position du Rapport Rueff sur cette question de présentation budgétaire est un bon exemple de l'interpénétration entre technique et politique. La création d'un „budget des prêts rentables" et les conditions dont son fonctionnement est assorti constituent un sûr indice de la politique dont il serait l'instrument: politique de confiance dans les mécanismes classiques et la renaissance du marché financier; politique de confiance également dans les possibilités et dans la volonté du secteur privé d'aider à réaliser ou d'assurer lui-même les investissements nécessaires à l'expansion. Et l'on a l'impression, le Trésor étant considéré, pour une partie d'entre eux, comme un simple intermédiaire, que l'on ne serait pas loin de préconiser, dans une deuxième étape, une „débudgétisation" complète de ces investissements, c'est-à-dire la remise au marché financier non seulement du soin de leur financement, mais également du soin de leur décision, ce qui constituerait un notable recul de l'intervention de l'Etat dans la vie économique.

Il n'est pas nécessaire de pousser si loin le libéralisme pour expliquer les critiques qui ont été adressées à la politique française. Les intentions prêtées à M. Rueff avant la publication du Rapport et celles que décèle le rapport suffirent à alimenter les polémiques. Impératifs politiques et conditions économiques qui ont présidé à l'élaboration du budget de 1959 méritent d'être rappelés.

II. *Environnement politique et économique du budget de 1959*

Le budget de 1959 revêt une importance particulière. Il est en effet le premier budget de la Vme République dont le gouvernement fort est en mesure de mener une véritable politique, au sens complet du terme, c'est-à-dire un ensemble de mesures coordonnées en vue d'un but déterminé.

Il a été dominé par un certain nombre d'impératifs politiques découlant de choix extérieurs à lui, s'imposant à l'économie et aux finances françaises comme des données et comportant des obligations de dépenses publiques inéluctables et peu compressibles.

C'est ainsi qu'en Algérie le gouvernement, soutenu par une large fraction de l'opinion française et algérienne, entend poursuivre les deux buts: le maintien de la présence française (ce qui implique la

révision dans le budget de 1959 des dépenses militaires relatives la poursuite des opérations) et le développement économique otamment promis par le Général de Gaulle dans son discours de Constantine. Une ordonnance du 4 Janvier relative au concours de l'Etat à la réalisation du plan de développement économique et ocial de l'Algérie dispose que, de 1959 à 1963, deux tranches de épenses seront chaque année prévues à cet effet, l'une minima de 00 milliards et l'autre conditionnelle qui sera déterminée par la loi e finances. Par ailleurs, l'article 156 de la loi de finances de 1959 prévu un accroissement de l'aide, déjà importante, que l'Etat pporte aux entreprises concourant au développement industriel e l'Algérie; garanties, remboursements de charges fiscales et so-iales s'analysent comme des perspectives soit de dépenses, soit e moins values de recettes.

La nécessaire contribution de la France au développement économique et social des pays et régions de la Communauté française omportera des charges analogues.

L'évolution démographique française est une autre donnée du roblème financier entraînant des dépenses publiques qui sont inéuctables, notamment en matière d'écoles et de logements, et qui résentent, pour 1959 et les années suivantes, un rythme d'accroisement bien supérieur à celui des dépenses en général comme à celui u revenu national. Et nous ne ferons que rappeler les dépenses ncompressibles de la dette publique des traitements, etc...

Pour toutes ces raisons, la marge de manoeuvre financière était troite. D'autres impératifs politiques conditionnaient les choix conomiques, tels nos engagements en matière de politique commerciale et douanière vis à vis de l'O.E.C.E. et du Marché Commun. Combiné avec l'état, pour le moins fragile, de notre balance des aiements et la surévaluation incontestable du franc, le respect de es engagements conduisait à une dévaluation du franc que l'on peut onsidérer comme un impératif „dérivé".

Mais les choix économiques pris à l'occasion du budget sont aussi, t même avant tout, fonction de la situation économique interne du ays. Qu'était-elle en France au moment de l'élaboration du budget le 1959, c'est-à-dire au dernier trimestre de 1958? Tout le monde tait d'accord pour reconnaître que la France traversait une période le „récession".

Le terme de récession est nouveau. On l'applique en général aux luctuations cycliques d'après-guerre, par opposition à celles d'avant-

guerre. D'après la majorité des auteurs [11]) la récession désigne une interruption de croissance, et même parfois une simple „chute" d'intensité dans un mouvement ascendant. Elle constitue un recul modéré dans l'évolution de la conjoncture, une „contraction mineure" qui demeure en deçà du seuil de rupture. Le franchissement de ce seuil, déclenchant les mécanismes cycliques classiques, la transformerait en véritable dépression. C'est un fait que, depuis la guerre, les économies capitalistes n'ont plus connu de crise pathologique. Ne le doit-on pas à l'Etat dont les instruments de connaissance et d'action s'améliorent et qui peut ainsi surveiller, contrôler, éventuellement redresser les mécanismes économiques naturels? En tout cas, il semble bien qui ce soit d'une affection bénigne de ce genre que souffre la France à la fin de 1958.

Et cette récession française va être à l'origine d'une opposition doctrinale, d'une polémique dont on a pu dire qu'elle constituait une nouvelle phase de la „querelle des Anciens et des Modernes" et d'où vont être tirées des positions différentes sur les options économico-financières à prendre pour 1959 [12]).

La position classique se rattache nettement à une expérience économique française, puisqu'elle se réfère explicitement au „miracle Poincaré" de 1927, pensant qu'il dépend de nous qu'il se renouvelle en 1959. Selon elle, la France de 1959 doit restaurer sa monnaie, ce qui implique l'ajustement du taux de change, puis prendre toute mesure nécessaire pour préserver le nouveau taux, et surtout éviter tout ce qui pourrait contribuer à le détériorer et particulièrement tout ce qui serait susceptible d'alimenter ou de relancer l'inflation, „oeuvre du diable", source des maux économiques et financiers de la France. C'est dans le cadre de ces précautions que se situe la stricte limitation des dépenses publiques aux recettes d'impôt et d'emprunt.

[11]) Cf. le no. 6 de 1957 de la Revue Economique consacré aux récessions économiques et notamment l'article introductif d'H. Guitton et celui de J. M. Jeanneney sur les récessions françaises d'après guerre.

[12]) La position classique est représentée par le Rapport Rueff. La position moderne s'est affirmée dès avant la publication de ce rapport à l'annonce du nom du Président du Comité, classé comme un économiste libéral, et sur la foi de quelques informations qui avaient filtré des travaux. Elle fut principalement défendue par M. Chalandon, Trésorier et leader financier de l'U.N.R., parti le plus nombreux à la Chambre. Une position intermédiaire a été celle de MM. Dumontier et Malterre dans leur Rapport au Conseil Economique sur la „conjoncture économique du 2me semestre 1958".

Mais la recommandation d'une telle politique ne relève pas de attachement à un étroit juridisme monétaire. On pense que la ondition nécessaire et suffisante de la restauration économique et nancière générale du pays est le rétablissement de la santé de la onnaie. La confiance dans la monnaie fera parvenir sur le marché nancier les capitaux qui sont nécessaires à l'Etat comme au secteur rivé pour financer l'expansion, pour assurer les investissements dispensables. Ventes d'or et repatriement de capitaux constitueont les voies immédiates d'alimentation de ce marché; et la relève era ensuite tout naturellement assurée par l'épargne française et rangère redevenue confiante.

Mais dans l'incertitude du moment où cette politique porterait ses uits et d'une part se basant sur la moyenne des montants des mprunts publics des dernières années, d'autre part désirant demeuer nettement en deçà du minimum prévisible, le Rapport Rueff onseille, pour 1959, un découvert budgétaire total de 445 milliards ui, compte tenu d'amortissements de 156 milliards, provoquerait n accroissement de l'endettement de l'Etat de moins de 300 milards. Cet endettement a été de 1.158 milliards en 1957 et de 637 n 1958. L'on mesure ainsi l'effort d'assainissement.

Mais cela ne constituerait-il pas un danger dans une économie n récession? Pour y parer, le Rapport conseille de prévoir des proammes de dépenses complémentaires d'investissement à lancer en as d'accentuation de la récession, bien entendu uniquement dans la mite des excédents d'épargne inemployée. Mais le risque ne serait-il as grand que l'effet du programme complémentaire de dépenses ubliques se fasse sentir trop tardivement pour empêcher que la écession ne dégénère en crise par suite de l'apparition de phénoènes cumulatifs, surtout si l'on doit attendre la formation d'excéents d'épargne. D'ailleurs la théorie [13]) et la pratique [14]) contempoaines semblent préférer comme politique financière anti-cyclique es réductions d'impôts aux accroissements de dépenses.

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[13]) Cf. notamment P. Tabatoni - „La rationalité économique des choix finaners" in Economie appliquée, nov. 1955 p. 441 et s. et les auteurs cités par lui ont H. M. Groves.

[14]) Ainsi l'étude de l'évolution de l'économie et des finances américaines depuis 950 fait ressortir que le montant des dépenses publiques a varié sous l'influce de faits extérieurs et non en fonction de la conjoncture; notamment, le ouvernement n'a pas hésité à les réduire après la guerre de Corée malgré tat de récession dont souffrait alors l'économie.

Une deuxième réserve qu'appelle la position classique est sa conception simpliste de l'inflation. Elle se fonde sur une approche globale en assimilant source d'inflation et recours à des moyens de financement des dépenses publiques autres que l'impôt et l'emprunt. On peut adresser à cette analyse la même critique qu'à l'impasse. L'approche globale ne peut constituer qu'une première approximation et les quantités globales ne sont vraies qu'ex post. Or, la définition du budget en fait une étude ex ante. A ce stade, on ne peut dégager de l'examen d' „agrégats" que des tendances. Les correspondances entre équilibres et déséquilibres budgétaires et économiques sont des possibilités, éventuellement des probabilités, mais non des nécessités de fonctionnement [15]). Seule une étude par secteur des recettes et des dépenses publiques autoriserait des conclusions précises sur l'existence et la force de pression inflationnistes.

Enfin, la position classique appelle un troisième ordre de réserves qui se rattachent à son esprit libéral et davantage à ce que cet esprit laisse supposer de développements futurs qu'aux suggestions contenues dans le Rapport Rueff lui-même. Entreprendre la résurrection du marché financier de la place de Paris, on ne peut qu'y adhérer. Les moyens conseillés pour y parvenir semblent judicieusement choisis; les facteurs psychologiques y tiennent une place éminente; tenter l'expérience classique telle qu'elle est exposée dans le Rapport Rueff constituerait un véritable pari sur comportements [16]). Et c'est à ce point de vue que la politique simpliste et sévère préconisée en matière de mesures anti-inflationnistes se justifierait, étant donné la sensibilité des Français à tout ce qui touche l'inflation; mais à condition que d'autres mesures ne conduisent pas à une hausse de prix qui en détruirait l'effet bénéfique. Il est déjà plus contestable de prêter assez peu garde à la situation conjoncturelle française et surtout de se fier — mise à part la prévision de programmes de dépenses publiques complémentaires dont nous avons mis en doute l'efficacité — à la vertu des mécanismes financiers classiques pour guérir la France de la récession, consi-

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[15]) Cf. Revenu national et déficit budgétaire par F. Sellier Cahiers de l'ISEA série D no. 5 ainsi que dans cette revue, A. Barrère „La Problématique de l'équilibre budgétaire" - 1950 et J. Granié „L'équilibre budgétaire, un faux garant contre l'inflation" - 1949.

[16]) D'ordre psychologique est la création d'un „franc lourd" par la „suppression de deux zéros dans les prix", suggestion que le Gouvernement a retenue.

érée d'ailleurs comme un mal temporaire et nécessaire [17]). Mais serait encore plus hasardeux de se reposer sur le secteur privé u soin de l'évolution des structures économiques françaises, ce que emble présager, par exemple, le rôle minime reconnu au Trésor. aisser prendre à la finance privée les décisions majeures concernant es investissements que rendrait réalisables l'afflux de capitaux sur e marché serait peut-être ajouter un risque inutile aux risques endus nécessaires par les impératifs politiques; et ce précisement au oment où l'ouverture des frontières expose les économies natio- ales et les rend particulièrement sensibles aux conséquences de oute erreur.

Telles sont les réserves d'ordre économique que l'on peut formuler l'encontre de la position classique. Mais la position moderne est oin d'être à l'abri de critique et elle comporte également de gros sques.

Selon les „Modernes", l'objet premier de la politique économique t financière doit être la poursuite de l'expansion et son instrument ssentiel le maintien d'un haut niveau d'investissements privés et ublics, d'où facilités de crédit d'une part et, d'autre part, accepta- on de laisser se développer l'impasse qui, ceteris paribus, atteindrait, n 1959, 1.200 milliards, son financement continuant à être assuré ar l'emprunt et les moyens de trésorerie. Mais les „Modernes" ne e désintéressent pas du tout de l'épargne et — chose curieuse qui écoule de leur manque de confiance dans les mécanismes soi-disant utomatiques — ils insistent davantage que les „Anciens" sur les esures fiscales et autres qu'ils jugent indispensable de prendre our attirer les capitaux étrangers et inciter les nationaux à épargner, uis à offrir sur le marché les fruits de cette épargne.

Il convient de remarquer que la thèse expansionniste de 1958 n'a as, comme en 1936, porté l'accent sur la diffusion du pouvoir 'achat. Il eût été d'ailleurs déplacé de préconiser ajourd'hui en rance une politique tendant à développer la demande intérieure, lors que l'excès de sa pression est reconnu par tous comme l'un es dangers de notre économie. C'est pourquoi l'accent fut mis sur s investissements. L'on a certes raison d'insister sur la nécessité de nforcer l'efficacité de notre appareil de production, afin de per- ettre aux entreprises françaises d'affronter avec plus de chances

[17]) Les critiques ont beau jeu de rappeler l'exemple de la Grande Bretagne où ne politique de sévérité monétaire a provoqué depuis 3 ans un ralentissement e l'expansion économique.

la concurrence étrangère, notamment au sein du Marché Commun. Mais il ne suffit pas qu'une dépense soit d'investissement pour que soient évités les risques de pressions inflationnistes. L'investissement — qu'il soit public ou privé — engendre dans des délais variables mais relativement brefs, de quelques semaines ou de quelques mois, des cycles de dépenses secondaires de consommation suivant le jeu bien connu du multiplicateur; et ce avant que ne parviennent sur les marchés les biens et services qu'ils concourent à produire.

Les „Modernes" ne méconnaissent d'ailleurs pas ces risques. Mais pour eux l'assurance du développement de la production serait la seule garantie efficace contre l'inflation. Notre économie ne pourrait échapper à l'inflation que par une *fuite en avant*. Et inversant très exactement les termes du problème par rapport à la position classique, ils pensent que la réalisation de l'expansion renforcera la monnaie et restaurera l'équilibre budgétaire, tandis que, d'après le Rapport Rueff, stabilité monétaire et équilibre budgétaire garantissent l'expansion.

Mais quand bien même on ferait confiance à l'expansion pour guérir après coup l'économie des maux dont elle serait née, il convient de souligner que la réussite de cette politique se fonde sur un pari. Lançant sur les marchés des potentialités momentanément non gagées de demande, cette politique mise sur une ultérieure multiplication des biens et services susceptibles de les satisfaire. Or, il faut pour cela la réalisation de plusieurs conditions; il faut d'abord qu'il y ait production; il faut ensuite qu'elle soit amenée sur les marchés à des prix compétitifs; il faut enfin qu'elle réponde qualitativement à la demande. Et les tenants de cette politique se réfèrent explicitement ou implicitement aux richesses sahariennes. Ils comptent sur ces richesses pour fournir directement (utilisation en France) ou indirectement (exportations) les produits susceptibles et d'alimenter l'expansion et de satisfaire la demande. Encore faudrait-il que toutes les conditions que nous avons énumérées soient remplies. Ainsi, pour le pétrole, sa présence en quantités exploitables est certaine; les possibilités techniques de son évacuation sont prouvées; il reste à lui assurer, compte tenu de sa qualité, de son prix et de la forme monopolistique du marché de ce produit, les débouchés suffisants pour que son exploitation soit rentable. Et il n'est pas le seul produit pour lequel existent de telles incertitudes.

Enfin se pose un dernier préalable à la réussite de la politique de la „fuite en avant", celui de la limitation des décalages dans le

temps. Un décalage entre l'apparition de disponibilités monétaires et de biens réels est prévu, puisque ce sont les premières qui induisent la production des seconds; et des pressions inflationnistes ne peuvent manquer d'apparaître. Mais dans des conditions normales — et notamment en l'absence de spéculation — l'inflation declarée peut n'en pas résulter. Toutefois, le risque croît rapidement, si la venue des biens et services se fait attendre sur les marchés. Pour peu que le décalage augmente, ce peut être l'inflation qui, du fait de processus cumulatifs, ne sera pas ensuite stoppée par la seule venue — tardive — des biens espérés.

Face à des impératifs politiques contraignants, au sein d'une situation économique récessionniste, mais non encore purgée des séquelles de l'inflation, tiraillé par des conseils divergents, quelle politique le Gouvernement français a-t-il choisie? Dans quelle mesure le budget de 1959 en est-il l'instrument?

III. *Le budget de 1959 - Instrument de politique économique*

Il faut tout d'abord reconnaître à l'action gouvernementale récente en matière économique la qualité d'être une véritable politique, de constituer un ensemble de mesures coordonnées, logiquement reliées les unes aux autres en vue de réaliser le redressement économique et financier de la France.

Cette politique a été dominée par le souci du respect des engagements internationaux pris antérieurement. Ces engagements comportaient, entre autres, l'abaissement des barrières douanières et la réduction des contingents qui isolaient l'économie française. La libération aux frontières était donc un impératif; mais elle fut poussée plus loin qu'il n'était strictement nécessaire; ainsi, la France n'a pas fait jouer de clause qui eût pu retarder l'application du traité de Marché Commun et elle a poussé la libération de ses échanges au-delà du minimum (90 % contre 75 %). La raison de ce choix a été d'ordre politique: renforcer la position de la France dans les réunions internationales. Mais ce choix implique certainement une accentuation des risques économiques de l'opération. Il convient toutefois de rappeler et de souligner l'étalement sur quinze années de l'instauration du Marché Commun; la libération sera donc progressive.

La politique économique interne n'était pas impérativement imposée. Elle relevait des choix. Des deux directions qui lui étaient conseillées et qui, comme nous l'avons vu, comportaient toutes deux des risques, le gouvernement a incontestablement choisi la voie

classique, sans suivre cependant toutes les suggestions contenues dans le Rapport Rueff. Il a placé au centre de ses préoccupations le souci de la restauration monétaire: choix d'un taux de change réaliste et mesures pour le rendre „inébranlable", suivant le terme même employé par le Général de Gaulle. Tout autre choix en matière monétaire eût nécessité, vu la libération aux frontières, le recours à de nouvelles taxes ou subventions pour compenser la surévaluation du franc.

L'esprit libéral se retrouve dans d'autres mesures, telles les suppressions d'indexations et de subventions. Ces mesures correspondent à un souci de retrouver les prix „vrais" puis de les laisser ensuite évoluer librement. Elles impliquent une certaine confiance dans les „mécanismes naturels" chers aux libéraux.

Mais il est non moins certain que le gouvernement ne s'est nullement interdit d'intervenir dans la vie économique du pays et il y est en fait intervenu. Ainsi, il peut pratiquer l'open market et il n'a pas explicitement renoncé — comme l'aurait voulu le Rapport Rueff — à recourir à des moyens de trésorerie pour couvrir ses dépenses. Il peut manier le taux d'escompte et l'avait abaissé d'un demi-point. Par ailleurs, il avait relâché quelques-unes des restrictions dans le régime du crédit à la consommation. Ces deux mesures, prises avant le dernier train de réformes et la publication du budget de 1959, marquaient son souci de lutter contre les menaces de récession. Et à son programme figure l'instauration du régime de l'assurance-chômage, considéré comme l'un des stabilisateurs automatiques de la conjoncture. D'un autre côté, il entend continuer à surveiller les prix et contenir leur hausse dans les limites justifiées par la dévaluation, la suppression des subventions et l'accroissement de certains impôts. Et il a averti qu'il n'hésiterait pas à prendre des mesures autoritaires sur ce point qui est capital pour la réussite de sa politique, tant sur le plan intérieur que sur le plan des relations économiques extérieures.

Ces quelques exemples montrent que le libéralisme pur est loin de triompher. La théorie et la doctrine libérales ont d'ailleurs évolué dans un sens réaliste. Ne doit-on pas à M. Rueff lui-même le terme significatif de „marché institutionnel", catégorie économique nullement réprouvée par lui. A ceux qui critiqueraient la politique française actuelle pour son caractère hybride, l'on peut répondre que dans tous les pays occidentaux les économies sont mi-libérales, mi dirigées, seul variant le dosage de libéralisme et de dirigisme. En France, il vient de varier en la nette faveur du libéralisme. Une

tendance se fait d'ailleurs jour pour aller plus loin. Nous avons vu que le Rapport Rueff, s'il demande la budgétisation des investissements publics non rentables, suggère l'idée d'une „détrésorisation" des investissements rentables. Et certains libéraux parlent de „dénationalisations". De telles mesures ne sont nullement imposées par des impératifs. Et l'on peut se demander si elles sont économiquement souhaitables et politiquement possibles.

Le budget de 1959 participe du caractère hybride de la politique dont il est l'un des instruments.

Par la réduction de l'impasse, il peut constituer l'un des éléments de la restauration monétaire. L'Etat prouve ainsi ses efforts pour „réduire son train de vie" et l'effet psychologique de cette réussite est important. Aussi est-on même descendu au-dessous du chiffre mystique [18]) de 600 milliards: 586,8 milliards. Pour apprécier, sous les réserves que nous avons formulées plus haut, la signification de ce montant, on peut le rapprocher, soit de l'impasse de l'année précédente, 600 milliards — laquelle avait déjà marqué un vigoureux effort de compression par rapport aux impasses de 1956 et 1957 qui avaient dépassé 1.000 milliards; soit de l'impasse qui, en l'absence de mesures, eût atteint 1.200 milliards en 1959; soit des prêts que le Trésor consentira en 1959: 679 milliards par le Fonds de développement économique et social ou pour la construction.

Par le double effet de la suppression d'une partie des subventions et de l'augmentation d'un éventail assez étendu d'impôts divers (impôts spécifiques sur les consommations, taxe sur la valeur ajoutée, impôt sur les sociétés, impôt sur les personnes physiques), le budget de 1959 est le principal instrument de l'opération vérité-sévérité. Et, tout d'abord, vérité des prix grâce à la suppression de subventions qui bénéficiaient à de nombreux produits alimentaires, au charbon, ainsi qu'à des prestataires de services divers: chemins de fer, électricité et gaz, postes, etc. Cette suppression pourrait sembler constituer plus une manifestation de libéralisme qu'elle ne correspondrait à une nécessité. Il a été en effet avancé que les subventions n'ont d'effets néfastes que si elles sont financées par la création de monnaie. Si, au contraire, elles s'intègrent dans une

[18]) La conjonction, au cours des années 1953 à 1955, d'un montant d'impasse avoisinant 600 milliards et d'une expansion économique réalisée dans la stabilité a donné à ce chiffre une importance psycho-sociologique. Depuis lors on a eu tendance à le considérer comme une garantie de stabilité d'autant plus que - sorte de preuve a contrario - la brusque élévation de son montant, les deux années suivantes, a coincidé avec une hausse accélérée des prix.

politique d'équilibre budgétaire, elles peuvent efficacement aider à stabiliser les prix [19]). Ainsi donc, on pourrait dire que la „sévérité" aurait pu dispenser de la „vérité". Mais en fait, dans le contexte du budget de 1959 et avec l'étroitesse de sa marge de manoeuvre financière, la suppression des subventions constituait l'une des seules possibilités de réduction des dépenses publiques. Elle était donc une condition de la politique de sévérité. Cette sévérité s'analyse comme une restriction de la consommation des particuliers. Elle sera surtout efficace si, atténuant la pression de la demande intérieure, elle permet un accroissement des investissements et des exportations. Mais elle a exposé la réforme à un reproche justifié, celui d'avoir assez mal réparti les sacrifices. La diminution sensible du niveau de vie qui va en résulter pour tous les Français pèsera comparativement beaucoup plus lourdement sur les petits et moyens revenus. On peut espérer que des correctifs ou des compléments seront apportés dans ce sens au budget de 1959. Ce seraient des aménagements utiles et faciles à prendre au vu de l'évolution des prix et des revenus [20]).

Enfin, par l'accent mis sur les investissements qui sont en augmentation sur les années précédentes, le budget de 1959 souligne deux buts importants de la politique gouvernementale: d'abord prévenir une aggravation de la récession, ensuite conserver à l'Etat la place qu'il occupe dans l'édification des structures de la Nation.

Le budget est, par essence, un document prévisionnel. S'interroger sur ses conditions d'exécution c'est s'interroger sur l'évolution de la situation économique en France, autrement dit sur les chances de succès de la nouvelle politique. Quatre risques principaux la menacent.

Il ne semble pas que le risque de récession soit très grave et ce pour plusieurs raisons. Tout d'abord, depuis la dernière guerre, aucune récession n'a dégénéré en crise. Ensuite, l'ambiance internationale est à l'optimisme depuis que la reprise s'est manifestée aux U.S.A. Et, enfin, le gouvernement a déjà pris des mesures pour la pallier et en détient d'autres en réserve [21]). Il se pourrait que,

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[19]) Cf. notamment R. Passet - Les subventions économiques et la lutte contre l'inflation - Ed. Montchrestien - Paris - 1956

[20]) Quelques aménagements de ce genre ont été pris dans l'ordonnance rectificative de la loi de finances adoptée en Conseil des Ministres du 4 Février.

[21]) Au début du mois de février, le gouvernement a, à nouveau, abaissé d'un quart de point le taux de l'escompte, ainsi fixé à 4¼ %, et légèrement élargi le crédit, notamment à moyen terme.

dans cet ordre d'idées, il soit obligé, en cas de persistance ou d'accentuation des menaces de récession — notamment par baisse de la propension privée à investir — de relâcher la pression fiscale, sans préjuger de la réforme fiscale que l'instauration du Marché Commun rend indispensable et urgente.

Il y a davantage d'incertitudes pour ce qui est des prix. Aux causes de hausse que nous avons signalées (accroissement des impôts, suppression des subventions, dévaluation) le gouvernement espère que sa politique opposera des freins, notamment l'ouverture des frontières aux produits étrangers et la crainte de leur concurrence, sans compter la récession intérieure, alliée naturelle sur ce point. Par ailleurs, bien que la liberté ait été rendue aux prix d'un éventail assez étendu d'articles de grande consommation, il dispose de moyens pour agir sur les prix directement ou indirectement, quand bien même de telles mesures seraient quelque peu contraires à l'esprit libéral [22]). En effet, le front des prix revêt une importance primordiale. Ceux-ci constituent un élément déterminant des deux derniers risques.

Risque social, tout d'abord. Le libéralisme est réputé professer de l'indifférence à l'égard de l'aspect social des problèmes. Cet aspect n'est certainement pas celui qui, jusqu'à présent, a été le mieux réglé. La hausse du SMIG (salaire minimum interprofessionnel garanti) de 4½ % que le gouvernement a décidée ne compensera, pour les petits revenus, que partiellement les hausses de prix, même si elles demeurent dans les limites espérées. L'opinion est actuellement encline à admettre la nécessité de sacrifices. Mais les restrictions à la consommation ne peuvent pas être longtemps maintenues en régime démocratique. Et l'on peut se demander si le moment le plus dangereux à cet égard ne sera pas celui de la réussite de la politique, c'est-à-dire celui du partage des fruits de l'expansion entre groupes sociaux. La position de l'Assemblée Nationale axée vers la droite accroît les risques sur ce point.

Encore faut-il, pour cette réussite, que soit évité le dernier risque, le plus grave parce que le gouvernement a le moins d'armes à son égard, le déséquilibre de nos échanges extérieurs. Il est assez difficile de prévoir les effets conjugués qu'auront les diverses mesures prises

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22) Un mois et demi après le début d'application de la réforme, on peut dire qu'il n'y a pas eu de hausses spéculatives précédant les hausses mécaniques qui se réalisent peu à peu.

sur les courants d'échanges extérieurs. La libération doit favoriser les importations, mais la dévaluation doit les freiner. Quant aux exportations, favorisées par la dévaluation, elles peuvent être freinées par les hausses de prix intérieurs. Que devons-nous souhaiter? Des importations aideraient à contenir les hausses de prix, mais pourraient, en forçant les entreprises marginales à se reconvertir, aggraver momentanément la récession [23]); en outre, elles déséquilibreraient la balance commerciale que les exportations favoriseraient au contraire, mais en constituant des sources de pressions inflationnistes.

Ces incertitudes eussent été réduites si l'économie française s'était, comme d'autres l'ont fait, peu à peu préparée à cette libération aux frontières. Et il faut se garder de croire que l'afflux de capitaux étrangers — qui constitue l'une des premières réactions favorables à la politique française, nonobstant les incontestables risques inflationnistes qu'il comporte — puisse résoudre toute la question. Ces capitaux, s'ils ne fuient pas dès le premier nuage financier, pourraient aider la France à surmonter telle ou telle difficulté momentanée de la balance des paiements. Ils ne résoudront pas le problème fondamental de la structure des échanges commerciaux — dont nous avons des raisons de craindre, par les expériences passées, qu'il ne comporte un déséquilibre à notre désavantage. Or, ce ne sont pas seulement les échanges avec l'extérieur, mais c'est la vie économique nationale elle-même que la libération aux frontières — que nous nous étions engagés à réaliser — et la suppression de l'UEP — conséquence automatique de la convertibilité à laquelle nous avons été contraints — exposent directement et rapidement aux effets d'un tel déséquilibre.

Sur tous ces points, la vigilance du gouvernement doit être attentive à l'évolution qui va se dessiner et assurément le chemin est étroit entre les différents écueils. Il doit être prêt à arbitrer entre intérêts opposés, à faire triompher l'intérêt général et, au delà des discussions d'école, à conjuguer ses efforts avec ceux du secteur privé pour orienter l'économie française dans des voies qui garantissent l'équilibre de nos échanges extérieurs, tout en assurant l'expansion intérieure.

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[23]) L'étalement de l'instauration du Marché Commun peut faire espérer que les principales reconversions seront repoussées à un temps où la récession sera surmontée; en outre, donnant la possibilité de s'y préparer, il permettra de réduire le plus possible les temps de perte d'activité.

BUDGET AND ECONOMIC POLICY

The French budget for 1959

by E. VESSILLIER

SUMMARY

The budget is at present one of the principal instruments of the economic policy of a country.

Since the Liberation, the French Budget has gone through an evolution which has been dominated by two seemingly contradictory tendencies, viz. that of totalization and that of differentiation. In order to judge exactly what will be the economic and social impact of the Budget on the life of a country, one should know the total amount of money involved. But the multiplicity of Government activities calls for different modes of presentation and treatment. Special Treasury accounts, ordinary and extraordinary Budgets, running and capital expenditure, functional classification of expenditure etc. constitute as many efforts to fall in with one tendency without sacrificing the other.

The last stage of the French budgetary evolution dates from the end of 1958 and the beginning of 1959. Its position vis-à-vis the technical problem of budgetary subdivisions (creation of a budget of loans and advances) reflects the liberal trend of the recent French reform. But it is necessary to know the political and economic climate in order to understand this reform and the place occupied in it by the French 1959 budget.

The preparation of this budget has been dominated by political demands which force themselves upon French economy and finance. These involve obligations as to public expenditure which are inescapable and can hardly be pruned: continuation of operations in Algeria, promotion of economic and social development in overseas territories, building of schools and dwellings necessitated by the growth of the population, etc. Not less stringent were the imperative demands involving economic decisions, such as obligations with respect to the O.E.E.C. and our partners in the European Common Market. And further a beginning recession gave rise to a polemic that constituted a new phase of the dispute between the Classicists and the Modernists.

The objects of the two parties are the same: economic and financial restoration of the country; expansion of its production and raising its standard of living. However, they differ as regards the means to attain these ends and as to the order in which measures should be taken. According to the Modernists, the realisation of the expansion, which should be pursued at alle costs, would strengthen the monetary position and restore the budgetary equilibrium, whereas according to the Classicists monetary stability and budgetary equilibrium will undoubtedly lead to expansion. The two systems include undeniable risks and ask for reserves in the field of finance and economics.

By placing the strengthening of the money, both at home and abroad, in the centre of their activities, the Government have decided in favour of the classical point of view, which has been laid down more particularly in the Rueff report, without, however, following all the suggestions made in this report. And it would seem that they are not prepared to adopt a pure and uncompromising liberalism. They have reserved means of intervention and will not fail to apply them.

The French 1959 Budget has some of the hybrid characteristics — partly liberal, partly planned — of the policy of which it is the instrument. By reducing the deficit, it constitutes one of the elements of monetary reform. By doing away with subsidies and increasing taxes it is the main agent in the operation "vérité-sévérité" (truth-severity). Finally, by putting the stress on investments, it tends to avoid a further recession and marks that the State intends to keep the place it holds in the setting-up of the Nations' structures.

The main risks involved in this policy are: fairly unlikely a further recession, certainly an increase of prices to an extent which it is difficult to predict, some social agitation and, finally, a persistent disequilibrium in our foreign exchanges.

Apart from academic discussions the public and private sector should combine their efforts to direct the French economy in such a way as to warrant the equilibrium of foreign exchanges and to secure the economic expansion at home.

IMPORT DUTIES AND THE BASIC EQUATIONS OF SOCIAL ACCOUNTING

by H. BURTON

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In the systems of Keynesian social accounting as practised in the major countries, import duties have no special significance — they are simply aggregated with the total of taxes on expenditure. Recently in the United Kingdom, though no separate estimates of import duties are given in the national income statistics, this part of taxes on expenditure is said to have special significance requiring special treatment [1]). The main effect of the new treatment of import duties, so far discussed, is on the definitions of gross national and domestic product at market prices (GNPm and GDPm). The new official definitions of GNPm and GDPm exclude import duties, in contrast with international practice which includes in these aggregates all taxes on expenditure net of subsidies.

The purpose of this article is to present the social accounts of the United Kingdom for 1957 in the form of a matrix, to derive the basic equations of the system, to see what changes result from the new treatment of import duties, and to assess their relevance and significance.

THE MATRIX

The matrix summarises the consolidated social accounts of the United Kingdom for 1957. These accounts, in this presentation, record the values of the transactions for the whole economy in the economic activities of production, appropriation and capital formation, and the values of the transactions between the United Kingdom and the rest of the world. In the matrix each item appears only once, but an item is both a payment and a receipt so that both the sources and destinations of items are given. The rows record payments and the columns record receipts, and for each account the sum of the receipts must equal the sum of the payments thus giving the basic equations for each of the accounts of the system.

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[1]) See the author's „Expenditure Taxes, Imports and Gross Domestic Product at Market Prices", Economic Journal, December, 1957; J. L. Nicholson, „Import Duties and the Gross Domestic Product at Market Prices", Economic Journal, June, 1958; and H. Burton, "Import Duties and the Gross Domestic Product at Market Prices: A. Rejoinder", Economic Journal, September, 1958.

THE EQUATIONS

The capital account

The capital account takes either of two forms:

$$Sd + Kc = Id + If, \quad (1)$$

$$\text{or } Sd + Kc + Sf = Id. \quad (2)$$

By re-writing (1) as $Sd + Kc - Id = If$, it is apparent that the excess of gross domestic saving over gross domestic capital formation finances net investment abroad. Similarly, when (2) is re-written as $Sf = Id - (Sd + Kc)$, it is apparent that the excess of gross domestic capital formation over gross domestic saving is financed by net disinvestment or borrowing from abroad.

The rest of the world account

The rest of the world account also takes either of two forms:

$$M + Mt + Mi + If = X + Xt + Xi, \quad (3)$$

$$\text{or } M + Mt + Mi = X + Xt + Xi + Sf. \quad (4)$$

Re-writing (3) as $If = (X+Xt+Xi) - (M+Mt+Mi)$, it is apparent that the excess of earnings from exports (plus property income and transfers from abroad) over payments for imports (plus property income and transfers paid abroad) constitutes net investment abroad. Similarly, re-writing (4) as $(M+Mt+Mi) - (X+Xt+Xi) = Sf$, it is apparent that the excess of payments for imports (plus property income and transfers paid abroad) over earnings from exports (plus property income and transfers from abroad) constitutes net disinvestment or borrowing from abroad.

The production account

The production account gives the equation

$$C + Tn + Id + X = F + Te + Tm + Kc + M. \quad (5)$$

The main aggregates to be derived from the production account are those of gross domestic product at market prices and at factor cost. To obtain GDPm, imports (M) and subsidies (Tn) must be deducted from the production equation.

$$GDPm = C + Id + X - M = F + Te + Tm - Tn + Kc. \quad (6)$$

If there were no subsidies and no taxes on expenditure, both sides of equation (6) would be reduced by Te+Tm—Tn, and the value of the aggregate would be at factor cost. Since taxes on expenditure and subsidies do exist and are included in the market price valuation of, and expenditure on, C+Id+X, and Te+Tm—Tn is income in the appropriation account of public authorities not eliminated in consolidation [2]), Te+Tm—Tn must be deducted from equation (6) to obtain GDPf.

$$GDPf = C + Id + X - M - (Te + Tm - Tn) = F + Kc. \quad (7)$$

The new official definition of GDPm is also C + Id + X — M, but M is valued to include import duties. This way of expressing the formula is wrong. M cannot be valued to include import duties in the social accounts because, i) when M is so valued both the production and the rest of the world accounts will fail to balance, and ii) there is no justification for including import duties as a payment from the production account to the receipts side of the rest of the world account. Instead of deducting only Tn and M from the production equation, the official treatment also deducts Tm, so that the correct official equation should be

$$GDPm = C + Id + X - M - Tm = F + Te - Tn + Kc. \quad (6a)$$

It has been argued elsewhere that the left hand side of equation (6a) cannot measure the market price valuation of gross domestic product because it undervalues by the amount of import duties what is actually paid for that product [3]). It may also be observed that if M, in the definition C+Id+X—M, is to be valued at the prices paid for them by final buyers in the home country rather than at the prices paid to the overseas suppliers, does not logic require that X be valued not at the prices received from the overseas buyers but at the prices (that is including purchase taxes) final buyers would have to pay for them if they were sold on the home market? We are not, of course, advocating these methods of valuing X and M.

The right hand side of equation (6a) is no less vulnerable than the left hand side. F+Te+Tm—Tn+Kc (from equation 6) is the purchasing power made available to the home country from pro-

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[2]) Other tax payments cancel out in consolidation because they are transfers between sectors in the same economic activity, that is payments from one appropriation account to another.

[3]) H. Burton, *Loc. cit.*

duction within its own territory. Kc flows to the receipts side of the consolidated capital account and finances an equal value of Id. The remainder, F+Te+Tm—Tn, flows to the receipts side of the consolidated appropriation account and finances the bulk of the payments of that account [4]). With the official treatment, as in equation (6a), F+Te—Tn+Kc undervalues by the amount of import duties the purchasing power made available by production. F+Te+Tm—Tn flows to the appropriation account and not only F+Te—Tn. There seems to be no way of escaping this fact since the import duties are not paid out of the country.

The appropriation account

The appropriation account gives the equation

$$F + Te + Tm + Xt + Xi = C + Tn + Mt + Mi + Sd. \quad (8)$$

The main aggregates to be derived from the appropriation account are the national income or product aggregates. To obtain net national income or product at factor cost (NNPf) equation (8) is re-written as

$$F + (Xi - Mi) = C + (Mt - Xt) + Sd - (Te + Tm - Tn). \quad (9)$$

To convert NNPf to gross national product at factor cost (GNPf) Kc must be added to equation (9).

$$GNPf = F + Kc + (Xi - Mi) =$$
$$= C + (Mt - Xt) + (Sd + Kc) - (Te + Tm - Tn). \quad (10)$$

GNPf is a measure of the value at factor cost of the goods and services made available and, therefore, of the money incomes generated, by the nation's own economic activity. GNPf is defined to include net property income from abroad (Xi—Mi) but to exclude net international transfers (Mt—Xt). With this treatment the nation's purchasing power may be greater than (when Xt > Mt), or less than (when Mt > Xt), GNPf by the amount of net transfers. For 1957, transfers made abroad (Mt) exceeded transfers from

[4]) In fact, Te+Tm flows to the receipts side and Tn appears with the payments. But since the payment Tn is to the receipts side of the production account, and is a negative tax, it cancels an equal amount of the positive taxes on expenditure, so that Te+Tm—Tn is the real measure of purchasing power made available by taxes on expenditure. (Just as it is the real measure of the addition to market value resulting from taxes on expenditure when, as is usual in national economic accounting, the whole question of true incidence of expenditure taxes is abstracted from the analysis.

abroad by £ 77 million. This is the measure of the reduction in consumption expenditure or savings due to gifts abroad. Net transfers abroad are claims on United Kingdom production and, therefore, constitute a transference of national wealth to foreign ownership. In terms of 1957, the £ 77 million net transfer cancels an equal amount of United Kingdom overseas investment, as can be seen in the rest of the world account. When Xt > Mt, the net effect of transfers is to cause an equal increase in overseas investment, or an equal reduction in borrowing or disinvestment abroad [5]).

To obtain gross national product or income at market prices taxes on expenditure net of subsidies (Te+Tm—Tn) must be added to equation (10).

$$\begin{aligned} GNPm &= F+Kc+(Xi—Mi)+(Te+Tm—Tn) = \\ &= C+(Mt—Xt)+(Sd+Kc). \end{aligned} \qquad (11)$$

It is evident that the left hand side of equation (11) exceeds the right hand side of equation (6), that is GDPm, by net property income from abroad (Xi—Mi), so that GNPm may also be written as C + Id + X — M + (Xi — Mi).

The only change resulting from the new official tratment of import duties concerns GNPm. To equation (10) is added only Te—Tn instead of Te+Tm—Tn, so that

$$\begin{aligned} GNPm &= F+Kc+(Xi—Mi)+(Te—Tn) = \\ &= C+(Mt—Xt)+(Sd+Kc)—Tm. \end{aligned} \qquad (11a)$$

Comparing equation (11a) with (6a) it is evident that the official GNPm may be written as C + Id + X — M — Tm + (Xi — Mi).

The three definitions of GNPm

	The normal definitions	*The new definitions*
1.	C+Id+X—M+(Xi—Mi).	C+Id+X—M+(Xi—Mi)—T
2.	F+Kc+(Te+Tm—Tn)+(Xi—Mi).	F+Kc+(Te—Tn)+(Xi—Mi)
3.	C+(Mt—Xt)+(Sd+Kc).	C+(Mt—Xt)+(Sd+Kc)—Tr

With the normal definitions of GNPm, the first consists of GDPm plus net property income from abroad. It gives the market price valuation of goods and services made available from the nation's own economic activity. The second definition gives the compostion

[5]) For an official note on the treatment of international transfers see *National Income Statistics — Sources and Methods*, pp. 4-5.

of the money income generated by that economic activity. The third definition shows how this total purchasing power was disposed of. It is a matter of simple arithmetic, with the matrix, to check the correctness of these definitions. With the new definitions the pictures presented are at variance with the recorded facts. In the second definition, the addition to purchasing power from taxes on expenditure is Te+Tm—Tn and not Te—Tn; and with the third definition, if Tm is deducted from C, C can no longer be consumption expenditure at market prices, and if Tm is deducted from Sd+Kc, the remainder cannot be gross savings. The first official definition of GNPm undervalues the market price valuation of goods and services resulting from national production, the second undervalues the money incomes generated by that production, the third undervalues the expenditure or savings out of that money income, and the undervaluation in each case is by the amount of import duties.

With the first and third of the normal definitions of GNPm we may write the equation

$$C+Id+X—M+Xi—Mi = C+Mt—Xt+Sd+Kc,$$

which may be re-written as

$$C+Id+ (X+Xi+Xt) = C+Sd+Kc+ (M+Mi+Mt). \qquad (12)$$

We know from the rest of the world account that when the X items (Xs) exceed the M items (Ms), the difference can be shown as If, net investment abroad; and that when Ms > Xs, the difference is shown as Sf, net borrowing or disinvestment abroad. When Xs > Ms, equation (12) becomes

$$C + Id + If = C + Sd + Kc, \qquad (13)$$

and when Ms > Xs, equation (12) becomes

$$C + Id = C + Sd + Kc + Sf. \qquad (14)$$

Be deducting C from both sides of equations (13) and (14) we obtain the equations of the capital account.

With the new official definitions of GNPm, each side of the above equations will be reduced in value by —Tm, resulting in aggregates at variance with the known facts. Of course, by transposing —Tm from either side of the equations to the other side the item can be eliminated, but then the special treatment accorded to import duties will have been abandoned and the definitions of GNPm will revert to those of normal practice.

MATRIX FOR THE UNITED KINGDOM, 1957
(Estimates in £ million)

Payments / Receipts	Production	Appropriation	Capital	Rest of the World	Total Payments
Production		F 17,192 Te, Tm 2,953	Kc 1,770	M 4,444	F+Te+Tm +Kc+M 26,359
Appropriation	C 17,603 Tn 411		Sd 2,280	Mt 102 Mi 511	C+Tn+Sd +Mt+Mi 20,907
Capital	Id 3,813			If 237	Id+If 4,050
Rest of the World	X 4,532	Xt 25 Xi 737	Sf		X+Xt+Xi +Sf 5,294
Total Receipts	C+Tn+ Id+X 26,359	F+Te+Tm +Xt+Xi 20,907	Kc+Sd+Sf 4,050	M+Mt+Mi +If 5,294	

MEANING OF THE SYMBOLS

F stands for factor incomes (including residual error but net of stock appreciation and capital consumption).
Te stands for taxes on expenditure (excluding import duties).
Tm stands for taxes on imports.
Tn stands for subsidies (negative taxes on expenditure).
C stands for consumption expenditure at market prices.
Id stands for gross domestic investment expenditure at market prices.
Kc stands for capital consumption.
If stands for net investment abroad or the acquisition of financial assets.
Sd stands for net domestic savings.
Sf stands for net borrowing from abroad or the net reduction of financial assets.
M stands for imports of goods and services.
Mt stands for transfers abroad.
Mi stands for property income paid abroad.
X stands for exports of goods and services.
Xt stands for transfers received from abroad.
Xi stands for property income received from abroad.

DROITS D'ENTREE ET EQUATIONS DE BASE DE LA COMPTABILITE NATIONALE

par H. BURTON

RÉSUMÉ

Dans la récente comptabilité du revenu national, les statisticiens officiels du Royaume-Uni ont accordé une importance particulière aux droits d'entrée et à leur régime. Le présent article résume la comptabilité nationale du Royaume Uni pour 1957, formule les équations de base du système en termes d'usage international et fait ressortir les variations qui résultent du nouveau régime officiel des droits d'entrée. Il fait apparaître de nouvelles définitions du produit national et du produit domestique bruts et du revenu global en prix courants. On exprime l'opinion que les nouvelles définitions sont impropres parce qu'elles sous-estiment la valeur en prix courant du produit, le pouvoir d'achat suscité par l'activité économique et l'utilisation de ce pouvoir d'achat.

THE CHANGING PATTERN OF LOCAL GOVERNMENTAL REVENUE IN THE UNITED STATES

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More than one hundred thousand local units of government are operating in the United States at the present time [1]) Counties, townships or towns, cities, school districts, and special districts have been established as subdivisions of American states to provide the public with a wide variety of services. In recent decades acute problems have been encountered by local jurisdictions in their efforts to obtain revenues to meet mounting expenditures occasioned by a steady expansion of functions under conditions of rising costs. As a consequence of attempts to cope with perplexing issues, the pattern of local governmental revenue has been in a state of gradual change.

Current difficulties in financing local governments in the United States stem principally from the fiscal inadequacy of the property tax, long the major source of funds at the local level. This tax has retained its historic position as the most important single producer of local revenue, but its prominence in the fiscal scene has declined in a relative sense over the past quarter-century. Local units have been looking beyond the property tax in their search for revenue, with the result that keen competition for taxpayers' dollars has developed within the total framework of government [2]). Either directly

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[1]) As of January 1, 1957, there were 3.047 counties; 17,198 townships; 17,183 cities; 50,443 school districts; and 14,415 special districts in the country. Bureau of Census, *Summary of Governmental Finances in 1956*. Washington: United States Department of Commerce, August 23, 1957, p. 16.

[2]) In the absence of tax correlation among governments at different levels, current practices in the revenue sphere tend to resemble a competitive grab-bag operation. Untapped areas of available revenue grow smaller and smaller with the result that governments collide in their efforts to raise funds, according to A. B. Chapman, program chairman for the Tax Institute's 1953 symposium on tax correlation. He writes that "competition between governmental units to exploit revenue sources to their own advantage is largely a product of recent decades." No over-all solution to the problem, such as the separation of sources, is in the offing. For a treatment of many aspects of the comprehensive issues involved

or indirectly, local governments are now receiving considerable financial support from areas which have been tapped in earlier years mainly by the national and state governments.

It is acknowledged that an organization of local governments consisting of many small, overlapping segments is inefficient and costly to maintain. The total number of local units in the United States has been diminishing slowly in recent years as a consequence of a movement toward consolidation of school districts and annexation of special-district fringe areas by cities. There is little reason to believe, however, that the basic features of local governmental organization will be altered substantially in the foreseeable future [3]).

The problems involved in acquiring funds to finance local governments in adequate fashion have become difficult because (1) the scope of government at this level has been enlarged to encompass types of activities not previously regarded as public in nature; (2) residents of cities, towns, counties, and school districts have insisted on a higher quality of long-established public services than was provided a generation ago; (3) the rapid growth of population, or the rise in the ratio of population to land, has created a need for additional governmental action in certain areas [4]); and (4) the sharp upward movement of prices and wages in the last two decades has boosted the costs of government in a marked manner [5]). The in-

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in tax correlation, see Tax Institute, *Federal-State-Local Tax Correlation.* Princeton: Tax Institute, Inc., 1954. Mr. Chapman's statement appears on p.v.

[3]) For a concise statement of problems in connection with financing local government under the existing pattern of organization, see Mabel Walker, "Non-property Revenues and Service Charges," *Tax Policy,* Vol. XXIII, June, 1956, pp. 2-8. Mabel Newcomer recommends the "consolidation of our multitudinous local authorities into a smaller number of jurisdictions with boundaries that conform more nearly to local economic activities." She does not contend, however, that significant progress is being made in that direction. See Tax Institute, *op. cit.,* p. 100.

[4]) H. W. Peck developed the interesting thesis that the ratio of public to private expenditures tends to increase with the growth of population, wealth, and civilization. A rise in the ratio of population to land is a factor contributing to this change. Peck contends that public expenditures and per capita taxes can be expected to increase more rapidly than the upward movement in average wealth and income. For extracts from his *Taxation and Welfare* which reveal the reasons for his conclusions, see E. D. Fagan and C. W. Macy, *Public Finance - Selected Readings.* New York: Longmans, Green and Co., 1934, pp. 88-100.

[5]) The increase in the Bureau of Labor Statistics consumer price index from 62.9 in 1941 to 121.6 at the end of 1957 (1947-1949 = 100) indicates the extent

crease in local expenditures caused by the combination of these factors has placed a severe strain on the property tax, traditionally the core of local revenue systems. Demands for property tax relief have become widespread. As a result, other means of raising revenue for local governments have been introduced, chiefly as supplements to the property tax rather than as full replacements for this fiscal device.

Local governments have not been alone among public bodies in the scramble for additional revenue. Each of the states, for example, has found itself confronted with the task of obtaining an increasingly large sum annually to care for its expanding activities. Like local units, states are affected by population growth, the ensuing demands for more services, and the rising costs of providing them. One large producer of state revenue, the general retail sales tax, gained a foothold during the depression of the 1930 decade and has been regarded since that time primarily as a tax for use by states. The motor fuel tax is now a part of the revenue system of each state; personal and corporate income taxes are prominent in many states today; tobacco and liquor excises are presently levied by most state governments. The property tax, on the other hand, has been largely abandoned as a significant source of state revenue [6]). At the national level where the need for revenue is also pressing, receipts are derived chiefly from personal and corporate income taxes. Excises, payroll taxes, and estate taxes are responsible for a comparatively small part of federal tax collections, about one-fourth of the total. It is apparent from this listing of major sources of state and federal revenue that there are few taxes left to which local governments can lay principal claim. The property tax is one execption [7]). Local

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of the change in general prices in the United States since the start of World War II. *Federal Reserve Bulletin.* Washington: Board of Governors of the Federal Reserve System, Feb., 1958, p. 196. This rise in prices and an accompanying sharp increase in money wages have been reflected in an upward trend of costs of government.

[6]) The major exception is Nebraska. This state continues to obtain about 30 per cent of its total revenue from a levy on property, whereas the average among all states is only 3.5 per cent. See Tax Institute, *Tax Policy,* Vol. XXIV, Nov., 1957, pp. 3, 6, 7, for data on total tax collections in 1956, including state tax collections by source.

[7]) The national government does not tax property. The Federal Constitution provides that "direct Taxes shall be apportioned among the several States which may be included within this union, according to their respective numbers....."

units are attempting, however, to diminish their reliance on this means of obtaining revenue. Significant questions arise. What is the extent of the movement away from the property tax? From what sources are local governments receiving revenues to supplement property tax receipts? What are some of the effects of the changing pattern of revenue within the domain of local finance?

The Property Tax In Recent Years: Its Declining Relative Importance

The property tax is ancient in origin [8]). It began as a levy on land with its base being extended gradually to include other forms of property. From the colonial era to the present, the taxation of property has been an accepted fiscal practice in America. In fact, the role of the property tax has been so prominent in this country compared with its use elsewhere, that some writers have tended to view it as an American institution [9]) and "largely indigenous in the United States" [10]).

In spite of severe and long-standing criticisms on both theoretical and pragmatic grounds [11]), the property tax served as the leading producer of funds for state and local governments alike until a few decades ago when other taxes were introduced, particularly by

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(Art. I, sec. 2.) This provision prohibits the national government from levying a property tax which is recognized as a direct tax. The states, as noted, have largely withdrawn from the property tax field. See also Art. I, sec. 9.

[8]) The late E. R. A. Seligman was recognized as an authority on the history of taxation. For a discussion of the history of the property tax, see his *Essays in Taxation,* 9th ed. New York: The Macmillan Co., 1921, pp. 32-56.

[9]) One writer states that the property tax is "peculiarly an American development." W. H. Anderson, *Taxation and the American Economy.* New York: Prentice-Hall, Inc., 1951, p. 113.

[10]) J. P. Jensen, *Property Taxation in the United States.* Chicago: University of Chicago Press, 1931, p. vii. This point is developed more fully in a later section, pp. 19 ff.

[11]) Authors of modern public finance text books in the United States refer to acknowledged faults of the property tax. Many years ago, Seligman was highly critical of this tax, branding it as "a dismal failure." See *op. cit.,* p. 31. C. J. Bullock stated in the early part of the present century that the system of local taxation in the United States, mainly the property tax, was "crude, inequitable and unsatisfactory." See *The General Property Tax in the United States.* Columbus: The International Tax Association, 1909, p. 7.

states. While the property tax, as indicated above, has declined in relative significance over the last quarter-century, its productivity in absolute terms has risen rapidly, notably in the past ten years. Assessed values of property and millage levies have moved upward, but the resulting boost in property tax collections has not kept pace with the increase in tax revenues from many other sources.

Data in Table 1 below show the extent of the change in the relative importance of the property tax in recent decades. Slightly more than one-half of total tax receipts to all governmental units in 1932 (federal, state, and local) came from property taxes levied by state and local taxing jurisdictions. By the end of World War II, property tax revenue as a per cent of total revenue, exclusive of payroll taxes, had decreased in a marked manner, chiefly as a consequence of the sharp rise in federal receipts, all from non-property tax sources. After the war, the per cent of total tax revenue produced by the property tax increased to some extent, but the pre-eminent position which this tax held in the fiscal scene of twenty-five years ago has not been regained. Since 1950, an average of approximately 12 per cent of total tax revenue has resulted from levies on property. In addition to the increase in federal non-property tax revenue as a factor serving to lessen the relative importance of the property tax, the voluntary movement away from the taxation of property on

Table 1

PROPERTY TAX REVENUE AS A PER CENT OF TOTAL TAX REVENUE, STATE TAX REVENUE, AND LOCAL TAX REVENUE IN SELECTED YEARS.

(Exclusive of Payroll Taxes)

(1) Year	(2) Total Tax Revenue	(3) State Tax Revenue	(4) Local Tax Revenue
1932	55.5	18.1	92.5
1942	27.0	5.4	92.8
1946	9.34	4.6	92.1
1950	13.93	3.9	88.2
1952	10.7	3.8	87.5
1954	11.8	3.5	87.2
1956	12.8	3.5	86.8

Note: Some of these percentages were computed from data on tax collections in many issues of the Tax Institute's, *Tax Policy* and in the Bureau of Census, *Historical Review of State and Local Government Finances*, Special Study No. 25. Washington: United States Department of Commerce, June, 1948, p. 13. For a few of the years, the percentage computations were obtained directly from *Tax Policy* issues.

the part of states needs also to be recognized as an element which has contributed to the change. States obtained 18.1 per cent of their tax revenues in 1932 from levies on property, but only 3.5 per cent in recent years. This indicates the degree to which states have shifted the emphasis from the property tax to other revenue sources.

It is evident from the data in Table 1 that the property tax is assuming less responsibility today than formerly in the large task of providing total tax revenue and state tax revenue. It is equally evident from the data that this fiscal measure has retained its position as the most productive tax imposed by local governments. Its relative importance among local taxes has declined only slightly in the past few decades. In 1932, it produced 92.5 per cent of local tax receipts; in 1956, 86.8 per cent. Local sales taxes, income taxes, and excises have been introduced recently by some subdivisions of states as supplements to property taxes. They account for the modest drop in property tax revenue as a per cent of total tax revenue at the local level, but they have had little effect on the pattern of local revenue in the large. Subventions and grants-in-aid from states, particularly to cities and school districts, are mainly responsible for the decreasing dependence of local units on the property tax. A discussion of both non-property taxes and intergovernmental revenues as sources of funds for local governments follows in the next section of this paper.

To see properly the nature of the role played by the property tax in local finance during the last several years and the degree to which local jurisdictions rely now on non-property tax sources, the relationship between total local property tax revenue and total expenditures of local governments since 1932 needs to be noted. Data pertaining to these totals are presented in Table 2. Excluded from expenditures for the purpose at hand are publicly-owned utility company and liquor store outlays which tend to be offset by revenues resulting from direct charges for services and goods sold to consumers.

Total annual expenditures of local governments have increased approximately 300 per cent since 1932. The major portion of the increase came after 1946, which circumstance attaches particular importance to developments in the last decade. Some of the increase in outlays is represented by capital improvements, which had been held in abeyance during the 1930 depression decade and during the war period which followed. Local property tax revenue rose slightly

Table 2
LOCAL PROPERTY TAXES IN RELATION TO LOCAL EXPENDITURES.

(1) Year	(2) Total local expenditures in billions	(3) Local property tax revenue in billions	(4) Local property tax revenue as a per cent of total local expenditures
	$	$	
1932	6.4	4.16	65.0
1942	6.2	4.27	68.9
1944	6.2	4.36	70.3
1945	6.4	4.32	67.5
1946	6.9	4.74	68.7
1947	7.5	5.25	70.0
1948	8.0	5.85	73.1
1949	8.4	6.56	78.1
1950	8.9	7.04	79.1
1951	10.4	7.58	72.9
1952	17.9	8.28	46.3
1953	19.1	9.01	47.2
1954	21.0	9.58	45.2
1955	23.3	10.32	44.3
1956	25.0	11.28	45.1

Note: Data on total local expenditures were obtained from many issues of *Tax Policy* and from the Bureau of Census, *Summary of Governmental Finances in 1956*. Washington: United States Department of Commerce, August 23, 1957, p. 24. Revenue data were also found in various issues of *Tax Policy* and in the Bureau of Census, *Historical Statistics on State and Local Government Finance, 1902—1953,* Special Study No. 38. Washington: United States Department of Commerce, 1955, p. 21.

less than 200 per cent between 1932 and 1956, with most of this increase also coming after 1946. Between 1932 and 1944, property tax revenue as a per cent of total local expenditures rose a few percentage points, mainly because of a moderate decline in expenditures. Following a slight drop near the end of the war period, it increased again through 1950, only to fall sharply in 1952. From 1952 through 1956, it was fairly constant. Significant in this statistical picture of local expenditures and local property tax revenue is the fact that the property tax, shown above to be responsible for approximately 87 per cent of current local tax revenue, is producing now less than one-half of the total sum needed annually to care for expenditures of local governments. Only a few years ago, in 1950, property tax revenue was 79.1 per cent of total local expenditures. This striking change in a short period indicates clearly the extent to which local jurisdistions are presently relying on revenue from non-property tax sources.

In spite of the declining relative significance of the property tax in both the over-all and local fiscal pictures, the burdens of this tax continue to be heavy in many localities. Annual property tax collections for the use of local governments have increased about 60 per cent since 1950 [12]). Over the same period, the local per capita property tax rose approximately 48 per cent [13]) and per capita personal income roughly 31 per cent [14]). These data reveal that property tax payments are a larger per cent of personal income today than they were a few years ago. While this conclusion provides no answers to questions relating to equity in the distribution of property tax burdens, it does serve to explain why demands for property tax relief are now strong. In response to these demands, local authorities have searched hard for non-property tax revenues to supplement property tax receipts, but they have succeeded in shifting only a part of the load of financing local government from the shoulders of property taxpayers. The need for local revenue in late years has been such that high property taxes and supplementary sources of funds have been used jointly to keep local governments afloat. In the next section, attention is directed to an analysis of current sources of local revenue.

Current Sources of Local Revenue

Local governmental receipts from all sources were $ 26.3 billion in 1956 [15]). Included in this total was the sum of $ 3.2 billion in the

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[12]) In 1950, local property tax revenue was $ 7.04 billion; by 1956, it had increased to $ 11.28 billion. For 1950 data, see the Bureau of Census, *Historical Statistics on State and Local Government Finances, 1902-1953,* Special Study No. 38. Washington: United States Department of Commerce, 1955, p. 21; for 1956, *Tax Policy,* Vol. XXIV, Nov., 1957, p. 3. Statistics on local property tax revenue for other years are also found in these publications.

[13]) The per capita property tax for each year under review was computed by using data on total local property taxes obtained from the publications mentioned in footnote 12 and data on population found in the Office of Business Economics, *Personal Income by States, Since 1929.* Washington: United States Department of Commerce, 1956, pp. 144-145.

[14]) Per capita personal income data are included in *Personal Income by States, Since 1929,* pp. 142-143. See footnote 13 for reference to this publication.

[15]) Data on local revenue for 1956 were the latest available at the time this study was made. They provide a satisfactory picture of current sources. Those presented here are from the Bureau of Census, *Summary of Governmental*

form of utility, liquor store, and insurance trust revenue. For purposes of this study, the latter amount is ignored since the bulk of it was gross revenue from sales of utility services and liquor store products directly to consumers. These receipts were used primarily to cover the costs incurred by local governments in providing the services and goods. Therefore, total local revenue is considered here to be only that amount available to meet expenditures for general governmental operations. In 1956, it was $ 23.1 billion, or total revenue from all sources less receipts of $ 3.2 billion from sales on the part of public authorities. A breakdown of this sum, which is the realistic total for the year under review, is in order as a means of determining the relative importance of specific producers of revenue for the support of local governments.

Total local revenue consists of (1) general revenue obtained from local sources such as taxes, licenses, assessments, and charges for parking, and (2) intergovernmental revenue in the nature of funds channeled to local units from the states and the national government. In 1956, general revenue was $ 16.2 billion, or 70 per cent of total receipts to local units. Intergovernmental revenue was $ 6.9 billion, which accounted for the remaining 30 per cent of the total. Local taxes yielded $ 13 billion. This amount was 80 per cent of general revenue, but only 56 per cent of total local receipts. It is clear from these data that local governments place considerable reliance on intergovernmental revenue and local non-tax revenue as sources of funds.

An examination of the two broad classifications of local revenue, general and intergovernmental, reveals the importance of the property tax, as the major source of receipts from local sources, and state assistance programs, which are responsible for most of the intergovernmental revenue to local units. Local taxes other than levies on property, together with local non-tax sources of revenue, yielded $ 4.9 billion in 1956, or 30 per cent of general revenue. While these means of support for local governments are entitled to brief consideration, the property tax and state aid, both of which loom large as producers of revenue to finance local units, are given major attention in this study.

Local property tax revenue in 1956 was $ 11.3 billion. This was

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Finances in 1956, pp. 20-23. Adaptations were made and percentages were computed by the writer for the specific purposes of this study.

87 per cent of local tax revenue, 70 per cent of local general revenue, and 49 per cent of total local revenue [16]). School districts obtained about $ 4 billion by taxing property, and cities almost the same amount. Counties, towns and townships, and special districts shared the remaining portion of property tax collections. It is shown below that school districts received almost as much revenue from the states as from local property taxes in 1956 and that cities were also recipients of liberal grants from states. So long, however, as the property tax produces roughly one-half of total local revenue, including receipts which come to local units from the states, this fiscal measure continues to be the hub of the local financial wheel.

In order to supplement or partially to replace the property tax, several other types of taxes have been introduced by a limited number of local jurisdictions in various sections of the country. The movement toward the use of these methods of acquiring general revenue has been gaining momentum in recent years. Although the over-all productivity of these comparatively new local taxes is not great at the present time, their ability to raise substantial sums of revenue has been demonstrated in isolated areas where they have been in operation over a period of years. A trend in the direction of their further employment is unmistakable. In 1956, local governments collected $ 1.7 billion from non-property taxes. Receipts from these sources were 7.3 per cent of total local revenue, 10.6 per cent of local general revenue, and 13 percent of all local tax revenue. Cities obtained $ 1.4 billion from non-property taxes, or 82 per cent of the total amount produced by these levies for all local governments. General and selective sales taxes accounted for $ 833 million; the individual income tax yielded $ 149 million; and miscellaneous taxes were responsible for the remainder of city revenue from taxes other than levies on property. Counties, towns and townships, and school districts received only $ 300 million from such taxes. It is apparent that the position of the property tax in the local fiscal scene has been altered very little to date by the limited use of sales taxes, income taxes, and other relatively new local tax measures. Nevertheless, the employment of these property tax supplements by local

[16]) It is shown above that property tax revenue was 45.1 per cent of local expenditures in 1956. The fact that this revenue was a slightly higher per cent of total local revenue than of total expenditures suggests that expenditures were met, in part, by borrowing. This was the case in local outlays for certain capital improvements.

jurisdictions has advanced beyond the innovation stage and more pronounced changes in the structure of local revenue systems will probably be forthcoming in future years as a consequence of their further use.

In addition to receipts from local taxes, a sum of $ 3.2 billion from licenses, assessments, parking charges, and miscellaneous sources was a part of local general revenue in 1956. Cities collected $ 1.4 billion of this amount. Counties, school districts, and special districts received about equal shares of the remaining portion of the total. Collections from such sources are important in financing local governments, but recent developments in these areas have had little to do with the changes which have occurred in the pattern of local governmental revenue.

It is evident from the above presentation of general revenue data that the picture of local governmental finance has been altered only to a slight extent by the use of non-property tax sources at the local level. By way of contrast, intergovernmental revenue to the subdivisions of the states has become a significant element in shaping the course of local fiscal operations. Receipts to local units from other governments have been increasing steadily in recent years. At the present time, they are the major supplements to local general revenue. The declining relative importance of the property tax in the local scene has been caused mainly by the growth in the amounts of intergovernmental revenue received by local governments. It is noted above that property tax collections as a per cent of total local expenditures have decreased sharply since 1951. Over the same period of years, subventions and grants-in-aid have brought consistently larger sums to local treasuries. The increase in intergovernmental revenue needs to be recognized, therefore, as the chief reason for changes in the local revenue pattern.

Most of the intergovernmental revenue received by local governments comes from the states. In 1956, the states provided local units with $ 6.6 billion, or 96 per cent of total intergovernmental receipts to local jurisdictions. The remaining 4 per cent, or $ 300 million, was obtained from the national government. The latter is insignificant in amount at the present time. It should be noted in passing, however, that demands for additional federal aid, especially for local schools, are growing. To the extent that these demands are met in future years, further alterations in the relative importance of various sources of local revenue will result.

The amount received by local governments from the states in 1956 was 28.6 per cent of total local revenue. In the allocation of $ 6.6 billion in state funds, school districts were the recipients of $ 3.2 billion, or 48 per cent of all state-aid payments. Counties obtained $ 1.8 billion (27 per cent); cities, $ 1.3 billion (20 per cent); townships, $ 260 million, (4 per cent); and special districts $ 28 million (less than one per cent). These data indicate that school districts, in particular, benefit greatly from state financial assistance programs, and that cities and counties are also on the receiving end of quite liberal grants from the states. A significant part of the burden of financing local governments has been shifted, therefore, from local property taxpayers to those who pay taxes levied by state governments.

There are marked variations in the practices pursued by American states in allocating funds to their subdivisions. As a consequence, revenue systems of local governments differ from state to state. Also, the methods of raising revenue to be allocated to local units vary widely among states. Thus the final resting place of the burdens involved in supporting local governments, which depends, in part, on the nature of state revenue programs, is not the same in all states. Brief descriptions of local governmental revenue patterns in the three west coast American states (Washington, Oregon, and California) are presented here as examples of local finance in operation [17]). In each case, the degree of reliance on aid from the state is shown. The dissimilarity of the revenue systems of these states is considered in the next section of this paper, which is devoted to the effects of the trend away from the local property tax and toward the greater use of intergovernmental revenue from the states.

In Washington, receipts from local property taxes account for 80 percent of total local tax revenue, but they constitute a much smaller per cent of total local revenue from all sources because of the state assistance programs in operation. Washington cities share in state collections from the gasoline tax, motor vehicle excises, and liquor taxes to the degree that revenue from these sources equals that from the local property tax in many municipalities. Counties

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[17]) These summary statements are based on research done by the writer in the area of local governmental revenue. The three west coast states were given special attention in the study. Data were obtained from many publications of the states and from state officials who were interviewed.

receive only modest amounts from the state, and special districts almost nothing. But school districts depend heavily on grants from the state which are made chiefly from the state's general fund. In the 1956-57 fiscal year, 58.2 per cent of local school revenue for operational purposes came from the state, with 22.7 per cent only being produced by district property taxes. Approximately 10 per cent of school district revenue was derived from miscellaneous local sources. Counties and the federal government provided the remaining small portion of the total. It is significant to note that the state government of Washington contributed about two and one-half dollars toward the current costs of local schools to each dollar raised locally by taxing property. When school construction costs are included as a portion of the total outlay of districts, the burden on property taxpayers is shown to have been slightly greater. It is nonetheless apparent that the state is currently assuming a large part of the task of financing local schools in Washington. Moreover, the state, through its program of designating certain revenues to be shared with cities, is contributing liberally to the support of municipal units.

Local governments in Oregon obtain considerable financial aid from the state, although somewhat less in relation to total local revenue than in Washington. Approximately 16 per cent of current city general revenues and 21 per cent of county revenues are in the form of allocations made by the state from its gasoline tax collections and liquor business receipts. Local property taxes account for about 49 per cent of city and 42 per cent of county revenues. For the support of local schools, property taxpayers bear a heavier burden in Oregon than in Washington at the present time. Roughly two-thirds of the revenue needed now for Oregon school districts is produced by local property taxes. The state, through its aid program, contributes about one-third of the total. The role of the property tax is more important in the pattern of local finance in Oregon than in many other states, especially for the support of schools, but intergovernmental revenue to local units is not insignificant in this state as a supplement to local property tax receipts.

In California, as in the other two west coast states, subventions and grants from the state are prominent sources of revenue to local units of government. Substantial shares of receipts from the gasoline tax, motor vehicle licenses, and liquor excises are allocated to cities and counties by the state. This practice of sharing helps to explain why property taxes produce slightly less than 50 per cent of county

revenues and 40 per cent of city revenues. Local sales taxes are being widely used now by cities and counties in California, thus contributing to the decline in the relative importance of the local property tax. School districts, however, depend heavily on grants from the state, rather than on sales and income taxes, to take the pressure off the property tax. About one-half of the funds needed annually for the operation of California schools is obtained by taxing property. The state's contribution to school districts out of its general fund is approximately 47 per cent of the total revenue of districts. Property owners in California are taxed to support bond interest and redemption funds of school districts in addition to the levies for current operational costs. But those who finally pay the property taxes in this state are responsible for little more than one-half of the revenue required each year to meet local school expenditures.

The data on local revenues in the three selected states, merely sketched in this presentation, reveal variations in percentages received from different sources for the support of local government. In each state, however, the pattern of local revenue is in general harmony with the picture of local revenue for the country as a whole. The property tax continues to be highly productive at the local level, but subventions and grants from states are now very important supplements to the local property tax. Intergovernmental revenue to school districts from state general funds has special quantitative significance in contemporary local finance. This situation prevails in the three west coast states and in the country as a whole.

Some Effects of Recent Changes in the Pattern of Local Revenue

Changes in the pattern of local revenue in recent years, marked by an expansion in the use of property tax supplements, have caused alterations in the distribution of burdens involved in financing local government. While those who pay property taxes continue to bear a large part of local burdens, they receive considerable assistance now from other taxpayers.

A few years ago, the burden of financing local government fell almost entirely on property taxpayers. Within the last decade, however, the portion of the total load carried by these persons has declined relatively, although not absolutely, as sources of revenue

other than the property tax have been introduced into the picture of local finance. The incidence of taxes, which term is interpreted here to mean the coming to rest of the direct monetary burden of levies, is an important element in the determination of probable consequences of changes in the revenue pattern. Only those broad conclusions on shifting and incidence which are generally believed to be subject either to theoretical or empirical verification, or both, are presented in this paper [18]).

Many different types of property are taxed. Levies which tend not to be shifted are those on land value, or economic rent; on owner-occupied homes; on personalty in the form of consumer goods, such as jewelry and household furnishings; and on intangible property. The final payment in each of these cases is made by the owner. Taxes on other kinds of property may be shifted, wholly or partially, if short-run conditions permit. Tenants of dwellings and office buildings, rather than the owners, may pay the taxes on these properties as a part of rental charges for the use of space. Consumers may bear the burden of taxes on manufacturing plants and merchandise inventories through the operation of the pricing process. In other words, if demand conditions over the short-run period are favorable to sellers, taxes on income-producing properties will be shifted forward to tenants and consumers. If unfavorable, the monetary payments are likely to be divided between property owners, non-owner users, and the consuming public.

It is shown above that local property taxes are now being supplemented quite liberally by grants from states, but only slightly by local sales taxes, general and selective, and local individual income taxes. But the states obtain most of the revenue which they channel to subdivisions from general sales taxes, excises on selected products, personal and corporate income taxes, and business gross receipts taxes. Therefore, much of local non-property tax revenue is derived indirectly from these sources. In connection with the

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[18]) The writer treated the issues involved in shifting and incidence of property taxes in a paper prepared for delivery at the 1958 Annual Conference of the National Tax Association. He defined incidence as the coming to rest of the monetary payment of the tax and made a sharp distinction between incidence and long-run effects. In much of the current literature, incidence and effects are not separated for purposes of analysis. The brief statements on incidence of various levies on property which are presented above are conclusions reached in the other study.

incidence of these taxes, it is the concensus that levies on personal net incomes are not shifted and that those on corporate net incomes are borne by stockholders if corporation net profits are being maximized; that general and selective sales taxes are shifted to consumers; and that business gross receipts taxes are included in prices of goods and services. To the degree that local governments are financed by revenue derived from net income taxes, the burden is on the recipients of income as they earn. But when local support comes from general and selective sales taxes and from levies on gross receipts, individuals are taxed as they spend for consumption.

Property taxes are regressive to income whether their burdens of payment fall finally on property owners, renters, or consumers of goods and services produced with the aid of taxed property [19]). In none of these cases is the tax directly related to the income of the taxpayer. General and selective sales taxes and gross receipts taxes are also regressive to income, especially if food sold at retail stores is included in the tax base. Net income taxes are not regressive [20]). Their rates are usually proportional or moderately progressive when imposed by state and local governments. Regressivity, which has long characterized local revenue systems in the United States, is not lessened, but probably increased, as local units rely on general and selective sales taxes and on gross receipts taxes levied either by local or state governments to supplement or replace the property tax. On the other hand, revenue received by local governments from state or local income tax collections tends to reduce the regressivity of the over-all local revenue system. In current practice, general and selective sales taxes and business gross receipts taxes are more prominent than income taxes as pro-

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[19]) The degree of regressivity of state and local property taxes in the United States for 1954 is shown in R. A. Musgrave. "The Incidence of the Tax Structure and its Effects on Consumption", *Federal Tax Policy for Economic Growth and Stability*. Washington: Joint Committee on the Economic Report, November 9, 1955, p. 98. This is an empirical study based on certain assuptions relating to the incidence of taxes. The author estimates that effective property tax rates ranged in 1954 from 4.8 per cent of spending unit incomes of $ 2000 and less to 3.4 per cent of unit incomes over $ 10,000.

[20]) *Ibid.* Musgrave's 1954 estimates of effective excise and sales tax rates at the state and local levels considered together range from 5.7 per cent of spending unit incomes of $ 2000 and less to 2.2 per cent of unit incomes over $ 10,000. For state and local personal income taxes, the range is from .01 per cent to .8 per cent in these income brackets.

perty tax supplements [21]). There is little reason to believe, therefore, that the search for new sources of funds to support local governments is leading toward a greater degree of equity in the distribution of tax burdens, except in a limited number of states where income taxes produce the major part of state revenues allocated to local governments. In many cases, inequities are aggravated.

Some prevailing differences in the manner of distributing the burdens involved in financing local government are revealed in data pertaining to the three west coast states [22]). It is shown above that local units in Washington, particularly cities and school districts, receive substantial sums each year from state gasoline taxes, motor vehicle excises, and liquor taxes, and from the state general fund. Approximately 51 per cent of the general fund is produced by a retail sales and use tax, with food and several services included in the tax base, and 16.5 per cent by business and occupation gross receipts taxes. Emphasis at the state level in Washington is clearly on revenue measures in the category of consumption taxes. Thus it is evident that local governmental units in this state, especially school districts which receive about 58 per cent of their operating revenues from the state general fund, are financed in large measure by state taxes which are highly regressive to income. In other words, the supplements to local property taxes tend to be even more regressive than the taxes levied on property.

In Oregon, as indicated above, state revenue from the gasoline tax and profits from liquor sales provide some financial assistance to cities and counties, while school districts receive aid from the state general fund. The sources of this general fund differ widely, however, from those in Washington. A personal income tax, with moderately progressive rates, accounts now for almost 60 per cent of the fund's receipts and the corporation income tax for an additional 15 per cent. The prominence of these sources of revenue means that state tax collections in Oregon are related principally to net earnings, rather than to consumption as in Washington and many other American states. Although the amount of revenue received by local jurisdictions in Oregon from state funds is not large in relation to total local revenue, that portion of intergovernmental

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21) See Tax Institute, *op. cit.*, pp. 6-7, for data on revenues of states from various taxes.

22) See footnote 17 above.

receipts which is the result of appropriations from the state's general fund reduces regressivity at the local level.

Cities and counties in California share in state receipts from the gasoline tax, motor vehicle licenses, and liquor excises, but many of these governmental units collect additional revenue directly from local sales and use taxes. School districts, however, depend on allocations from the state general fund for the major part of their receipts to supplement district property taxes. At the state level, both sales and income taxes are levied, with food sold at retail stores excluded from the base. Approximately 58 per cent of California's general fund revenue is derived from sales and use taxes, 13 per cent from the personal income tax, and 16 per cent from corporation franchise and income taxes. To the degree that local governments in California are supported by revenue from the state general fund, over-all regressivity at the local level is probably lessened slightly since the taxes which produce the state general fund revenue, when considered together, are not regressive in nature. Local sales taxes alone, however, are likely to be mildly regressive in certain income brackets, even with food excluded from taxation. Supplements to local property taxes in California have caused the burdens of financing local government to be widely distributed, but regressivity has not been eliminated as a feature of the local revenue system.

CONCLUSION

Throughout the United States today, there are strong demands for property tax relief, with the result that the pattern of local governmental revenue is in a state of transition. Students of government finance are in general agreement that an increasingly large percentage of total revenue for local use in future years must come from sources other than property taxes. It seems probable that the movement toward state aid to local units will gain even greater momentum than has been evident recently. Local sales and income taxes may also be used more extensively than at present, but there are limitations on their employment by local taxing jurisdictions. A major policy question confronting those responsible for financing local governments concerns the selection of revenue sources which will result in a more equitable distribution of burdens in later years than has prevailed in the past. As the pattern of local revenue continues to change, general welfare will be enhanced only if highly regressive taxes are avoided.

MODIFICATIONS DANS LES SYSTEMES DE RECETTES DES COLLECTIVITES LOCALES AUX U.S.A.

par C. WARD MACY

RÉSUMÉ

Les programmes des recettes des gouvernements locaux aux U.S.A. ont été en état d'évolution pendant le dernier quart de siècle. L'impôt foncier a conservé sa position historique de plus important fournisseur de recettes dans les subdivisions des Etats américains, mais sa prééminence dans la fiscalité a connu un déclin relatif. Que ce soit directement ou indirectement, les collectivités locales reçoivent maintenant une aide financière importante de sources qui étaient surtout captées antérieurement par les gouvernements fédéraux et les états.

En 1932, l'impôt foncier représentait 55,5 % du montant de toutes les recettes d'impôts des U.S.A. 18,1 % des recettes des impôts d'état et 92,5 % du montant des recettes des impôts locaux. En 1956, les pourcentages sont respectivement tombés à 12,8, 3,5 et 86,8. Le rapport entre la totalité des recettes de l'impôt foncier local et des dépenses locales pendant ces années montre clairement que les collectivités locales sont de moins en moins tributaires des recettes de l'impôt foncier. En 1932, les recouvrements étaient de 65 % des dépenses locales; en 1956, seulement 45,1 %. Mais en dépit de leur importance relative décroissante, les recettes de l'impôt foncier se sont accrues de façon notable en termes absolus, créant ainsi une lourde charge d'impôt pour nombre de communauté's. Les versements d'impôt foncier aux collectivités locales sont un pourcentage plus important des revenus personnels aujourd'hui qu'ils ne l'étaient il y a quelques années.

La totalité des recettes d'un gouvernement local comprend: 1) les recettes générales provenant d'impôts locaux, licences, taxes et rémunérations de nombreux services et 2) les recettes intergouvernementales versées aux collectivités locales par les états et le gouvernement fédéral. En 1956, les recettes générales étaient de 16,2 milliards de dollars ou 70 % des recettes totales des collectivités locales. Les recettes intergouvernementales étaient de 6.9 milliards de dollars ou 30 % du total.

L'impôt foncier se monte à 70 % des recettes générales de l'année en question. Les impôts autres que le foncier, à 10,6 %; les impôts d'origine diverses tels que licences, taxes et droits, à 19,4 %. Ces données mettent en évidence que l'impôt foncier est toujours le principal responsable de cette fraction de recettes locales provenant directement d'origines locales. La manière dont les impôts non fonciers, licences, taxes, etc., ont été employés dans les dernières années a pesé assez peu sur l'évolution du système de finances locales. Par contraste, les subventions intergouvernementales aux subdivisions des états constituent un élément de grande portée dans l'évolution de la fiscalité locale. Son accroissement soutenu pendant les deux dernières décennies est la raison principale du déclin de l'importance relative de l'impôt foncier comme moyen de financement des gouvernements locaux. Subventions et dotations provenant en particulier des états se sont accrues plus rapidement que les recouvrements d'impôts fonciers locaux.

Les états américains ont soutenu par 6.6 milliards leurs subdivisions en 1956. Cette somme a représenté 28.6 % des recettes locales totales. Les districts ont reçu 48 % du montant, les comtés 27 %, les grandes villes 20 %; les villes, les communes et certains districts 5 %. Il existe, parmi les états américains, diverses méthodes de répartition des fonds aux collectivités locales. De plus, les moyens de lever dans les états les recettes à attribuer aux collectivités locales varient d'un état à l'autre. Ainsi, la répartition des charges que constitue le financement des gouvernements locaux n'est pas uniforme pour tout le pays. Par exemple, les données sur les systèmes financiers locaux et gouvernementaux de Washington, de l'Oregon et de Californie révèlent et des similitudes et des différences notables. Dans chaque état, l'impôt foncier local continue d'être très productif et des subventions de l'état aux localités leur fournissent d'importantes sommes en supplément aux ressources locales. Mais les trois systèmes gouvernementaux d'imposition sont dissemblables, ce qui signifie qu'une partie des charges des finances locales retombe sur divers groupes de contribuables de ces régions.

L'impôt foncier est régressif. Dans les limites où les subdivisions d'états américains comptent sur les impôts locaux sur les ventes ou sur des subventions provenant de recouvrement des mêmes impôts d'état pour suppléer à l'impôt foncier local ou le remplacer, la régression s'accroît. D'autre part, si des impôts sur le revenu net, soit locaux, soit gouvernementaux, ou les deux à la fois, sont utilisés

pour alléger le poids de l'impôt foncier, la régressivité est diminuée. Les subventions aux gouvernements locaux de Washington proviennent de fonds obtenus principalement par des impôts de consommation. En Oregon, l'impôt sur le revenu net est la source principale de revenus pour subventionner les gouvernements locaux. En Californie, les impôts locaux sur les ventes s'ajoutent dans une large proportion aux subventions d'état qui proviennent à la fois des impôts sur le revenu et sur les ventes. Dans l'ensemble des U.S.A., les impôts d'état sur les ventes tiennent une plus grande place dans les finances locales que ne le font les impôts sur le revenu net.

Alors même que l'impôt foncier, considéré comme moyen de financement pour les gouvernements locaux aux U.S.A. est relativement moins important maintenant que dans les années antérieures, on enregistre d'insistantes réclamations pour l'allègement de cet impôt. Les techniciens des finances d'état sont en général d'accord qu'un pourcentage plus élevé des recettes totales à la disposition des pouvoirs locaux doit provenir d'autres impôts que l'impôt foncier. Les impôts locaux sur les revenus et les ventes pourront être utilisés plus largement dans le futur, mais les pouvoirs locaux limitent leur emploi. Il semble cependant probable que la tendance à fournir aux gouvernements locaux l'aide des états continuera à gagner du terrain. Une importante question de politique se pose à ceux qui ont la charge du financement des gouvernements locaux: elle concerne le choix des sources de revenus qui donneraient une répartition équitable des charges. Le bien-être général ne sera accru que si la régressivité est réduite au minimum au fur et à mesure de l'évolution des systèmes de revenus locaux.

THE LIMITS OF TAXATION [1])

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Colin Clark's thesis on the limits of taxation [2]) has been criticized severely [3]), the target of criticisms being mainly his statistical demonstration that taxable capacity cannot exceed a quarter of national income. Yet statistics can neither prove nor disprove Clark's thesis, for even if a very high and positive correlation were found between time series of taxes as percentages of national income and indices of price levels, it would not be at all clear whether there is any direct causality between the two series, and if there is, which way it goes. Perhaps it is illuminating that at a later stage of the discussion Clark himself expressed despair of the statistical method which can never prove a case of causality [4]). Certainly it is strange that, in spite of his own emphasis on socio-political factors like inflationary and deflationary pressure groups, Clark arrived at a conclusion that the limits of taxation are the same, or at least almost the same, in countries like the U.K., the U.S.A., Italy, Japan, France,

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1) The original title of this paper was "On Taxable Capacity" and the term "taxable capacity" is frequently used in it. But this term, although better suited to denote the limits of taxation, is more often used as equivalent, or almost so, to the concept of "ability to pay", e.g. in the following phrase "income as a measuring-rod of taxable capacity". (Nicholas Kaldor, *An Expenditure Tax.* George Allen & Unwin, 1955, p. 14). The meaning of taxable capacity in the context of this paper will be strictly the first one.

2) Colin Clark, "Public Finance and Changes in the Value of Money", *The Economic Journal,* LV, December 1945, pp. 371-389; *"The Danger Point in Taxes", Harper's Magazine,* CC, December 1950, pp. 67-69.

3) Cf. Joseph A. Pechman and Thomas Mayer "Mr. Colin Clark on the Limits of Taxation", *Review of Economics and Statistics,* August 1952, pp. 232-242. And also, Dan Throop Smith "Note on Inflationary Consequences of High Taxation", *ibid.* pp. 243-247; Francois Visine, "La Signification des Statistiques Fiscales et leur Utilization", *Public Finance,* No. 1, 1955, pp. 7-81; P. D. Ojha, "Taxable Capacity in a Developing Economy", *The Indian Economic Journal,* Jan. 1955, pp. 263-273. A rather comprehensive bibliography is given at the end of *The Limits of Taxable Capacity* (Princeton, Tax Institute), 1953.

4) Colin Clark, "The Long Run Effects of Taxation upon Value of Money", *The Limits of Taxable Capacity,* p. 148.

Belgium, Norway, and other non-totalitarian countries [5]). It would be astonishing if the relative strength of the inflationary pressure-groups and the deflationary pressure-groups were that similar in all these countries. Indeed, if the size of taxable capacity has something to do with the burden of servicing the national debt, with the size and/or distribution of national income either between income groups or between wages, rents, interest payments and profits, with the relative strength of labor unions, with monetary policies, with the kinds of taxes in use and with their effect on the distribution of income, with the efficiency of the tax administration and with the morale of the taxpayers, with conditions of the balance of payments, with past experiences of inflation, and with what not, then it would be a truly amazing if taxable capacity would still be of the same size everywhere or almost everywhere. One does not have to be an institutionalist to admit that economic forces are not working in a vacuum, so that *a priori* their effects are not likely to be quantitatively the same regardless of the kind of economy involved even if the forces themselves were indentical, which they could not be.

Thus, if Clark's contention that taxable capacity is about twenty five percent of national income is rejected not because of a belief that it is higher or lower, but because one takes it for granted that the limits of taxation are probably quite different in each economy, all that remains of Clark's thesis is that there are limits to taxation. This by itself is by no means an unimportant statement, and it is definitely not a truism [6]). But Clark did very little to explain why

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[5]) See his *Economic Journal* article, pp. 375-386.

[6]) The very idea that taxes might have a capacity is not shared by all economists. For example, one of Professor Abba P. Lerner's counterarguments against the opponents of Functional Finance is that if taxes imposed to prevent inflation according to the rules of Functional Finance do not result in proceeds sufficient to finance government expenditures including the servicing of the debt, the "interest on the debt can be met by borrowing or printing the money. There is no risk of inflation from this, *because if there were such a risk a greater amount would have to be collected in taxes*". (Abba P. Lerner, "Functional Finance and the Federal Debt", *Social Research*, Feb. 1943, as reprinted in *Readings in Fiscal Policy*, London, George Allen and Unwin, 1955, pp. 468-478. The quotation is from page 475. Emphasis supplied). That is, the government can and should impose as much taxes as the rules of Functional Finance dictate. With full employment in the economy this means as much taxes as needed to finance government expenditures, *i.e.* there is no taxable capacity. On the other hand the classical economists' views on the national debt would seem inconsistent

such limits must exist and what are the factors that determine their size. Independently of Clark's thesis, this paper attempts to clarify the very meaning of the concept of taxable capacity.

A Definition of Taxable Capacity

Capacity is not exactly an economic term. For example, economists rarely discuss the capacity of firms or of industries. For a layman the capacity of a firm seems to be reached when the firm cannot produce any more, that is when the marginal physical output of additional variable factors of production is zero, if not negative. But in a world of economic scarcity such output would not and should not be produced. The economic question is how much the firm should produce, *i.e.*, what is its optimum output, not what is its maximum output. The same distinction between possibility and desirability holds when taxable capacity is discussed. For if the problem is how much taxes a government *can* possibly impose, the answer, since taxes are paid compulsorily, must be: 100% of national income plus taxation in kind (once for all) of all the privately-held national wealth. Citizens will not necessarily starve even if taxation reach such heights, for nothing is stated about the nature of government expenditures; they might be mainly transfer payments. Certainly, it is quite likely that a government imposing that much taxes, or even much less, would be angrily overthrown by the public. It is even more likely that an economy from which so much taxes were squeezed out will stop being a free economy. But these important questions of the political capacity of taxation only political-scientists or perhaps sociologists should attempt to answer. The question for the economist is how much taxes should a government impose, i.e. what is the economic capacity of taxation?

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unless they implicitly assumed that there were limits to taxation. Their objections to deficit financing rest more on the burden of the creation of the debt rather than on the burden of servicing it. The real sacrifice involved in increasing government expenditures, so they claimed, is a decrease in private consumption and investment. Since most of the classical economists did not think too highly of the governments of their times and would have liked to limit the scope of their expenditures, they urged against deficit financing. But tax-financed government expenditures too decrease private consumption and investment! Only — and this must be implicit in the argument — there is a limit to taxation. Cf. Jesse Burkhead, "The Balanced Budget", *Quarterly Journal of Economics*, May 1954, reprinted in *Readings in Fiscal Policy*, pp. 3-27.

The orthodox answer to this question used to be that since a budget should always be balanced the level of taxation is determined bij the level of government expenditures. The neo-orthodox answer, that of the Functional Finance school, is that the level of taxation should be determined so as to achieve full employment and a stable price level. Both answers imply that economic taxable capacity as such does not exist.

Yet while it is obvious that government expenditures have to be financed, the problems of the level of government expenditures and the level of taxation are separate ones. Ideally, government expenditures should be increased up to the point where the marginal social benefits of a pound of expenditure either on the supply of public consumption, or on transfer payments or on public investment, equals the marginal social sacrifices imposed on the economy by the additional expenditure. While the magnitudes of the marginal social benefits and marginal social sacrifices are not measurable, this definition of the economic *capacity of government expenditures* seems to be conceptually clear [7]). However, once the optimal size of government expenditures is decided upon, the problem of how to finance it still remains to be solved; for a government can finance its expenditures by various taxes, or by borrowing either from abroad, or from the public, or from the commercial banks, or from the central bank, or, if this is institutionally allowed, by printing its own money.

There is a choice to be made between taxation and inflation. Truly, taxation is superior to inflation, but the question is not whether inflation is superior to taxation or not. The economic choice is always at the margin and it is conceivable that at a certain level of taxation the marginal social sacrifice of some deficit financing is lower than the marginal social sacrifice of further taxation. When the economy is underemployed this is the usual case, since the marginal social sacrifices of deficit financing are quite low and may

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[7]) The size of the capacity of government expenditures may be perhaps approximated "by comparing the real product of the economic system with that part of it which is needed for the satisfaction of indispensable needs, exclusive of those rendered by the Governments". (Cf. Simon Kuznets, "National Income and Taxable Capacity", *American Economic Review,* Vol. XXXII, Number 1, Supplement, Part 2, March 1942, p. 42. Kuznets argues that this could be a conceivable method of measuring taxable capacity which must have been defined by him as the capacity of government expenditures.)

be even negative if indirect "multiplier benefits" are deducted from them. But even when deficit financing means inflation, the social costs of *some* inflationary deficit financing and *more* taxation should always be compared. As a matter of fact inflationary deficit financing is a tax too; it should be considered just like any other tax and be used when it is less costly at the margin than other taxes available.

A rational government will always use first the means of finance that involve the lowest marginal social costs. A tax with the lowest marginal social costs will be the first to be used. When this first tax reaches a certain level of revenues, the marginal social costs of further use of this tax might begin to exceed those of another one. This is where the first tax reaches its capacity [8]). Further revenues will be raised by a second tax until it, too, will reach its capacity when its marginal social costs will exceed those of a third tax, and so on. This is probably the main reason why the meaning of a "better tax" is so ambiguous. An income tax seems to be a much better tax than, say, an excise on sugar, but an increase in an income tax is not necessarily "better" than the imposition of the excise.

Taxation will reach its capacity when — and this might happen — the marginal costs of a certain tax exceed the costs of borrowings, and the wise decision is therefore: no more taxes. The same process applies, of course, to the different kinds of borrowings, so that borrowing from the public will reach its limits when the wise decision is no more of it, and so on.

The basic choice discussed in this paper is the one between tax finance and borrowing from the banking system and especially from the central bank (if institutionally feasible). This, of course, is not the only financial choice that a government has to make. For example, it might finance at least a part of its expenditures by means of borrowing from the public. Moreover, voluntary lending by the public does not inflict a burden on the lenders since the interest paid by the government is probably about the same as that which

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[8]) The only case where a Georgian single-tax idea would be justified, and one tax should be given a "fiscal monopoly", is where the marginal social cost curve of this tax does not intersect from below a marginal cost curve of any other tax, or, if it does, the intersection takes place where the proceeds from this first and only tax exceed the revenue-requirements of the government.

would have been paid on the alternative private securities [9]). But non-compulsory loans will reduce current consumption only to the extent that the increase in the supply of bonds (the increase in the rate of interest) has increased savings. The main deflationary consequence of the government borrowing from the public is therefore through the effects of the higher interest rate on private investment. Indeed, if a society is prepared to pay for government expenditures in terms of reduced private investment, it can lower its taxes and raise the interest rate; if government expenditures are lower than private investment, taxes might be done away with completely. The important marginal choice between fiscal and monetary devices for stability which in many respects is a choice between cuts in either consumption or investment, deserves its own discussion [10]). In this paper, to repeat, attention will be paid mainly to the choice between taxation and borrowing from the banking system.

Figure 1 represents diagramatically the argument that taxable

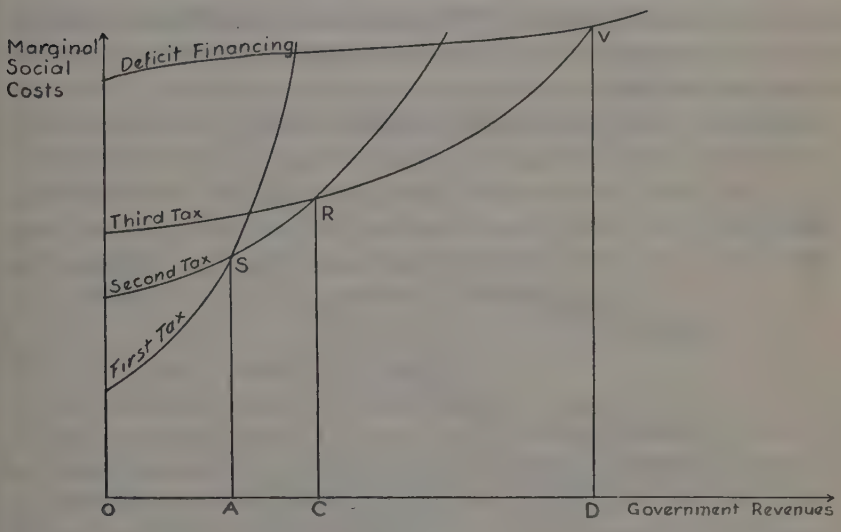

Figure 1

9) Cf. Paul B. Trescott, "The 'Burdens' of Government Finance", *Public Finance*, vol. XI, No. 2/1956, pp. 170-173.

10) Cf. Paul A. Samuelson's stimulating, "The New Look in Tax and Fiscal Policy", in *Federal Tax Policy for Economic Growth and Stability*, Papers submitted by Panelists (United States government printing office, Washington: 1956), pp. 229-234.

capacity is reached when at the margin, further taxation is socially more costly than deficit financing.

In figure 1, it is assumed that the marginal social costs of each tax at each level of government revenues are a function only of the size of government revenues and would be the same, therefore, whether all revenues up to that point were raised by this tax itself or by other taxes. The first tax is the source of OA of government revenues, the second of AC, the third of CD. But when government expenditures necessitate a revenue bigger than OD, deficit financing has to be used to finance any additional expenditure, since at the margin it is less costly.

The assumption underlying Figure 1 is unrealistic, for, certainly the marginal social costs of, say, the "second tax" at the point S would be different if the first OA pounds of government expenditures were financed by the first tax, by the second tax itself, of by any other tax. An extremely opposite asumption could be that the level of revenues from each tax, and not the level of all government revenues, determines the marginal social costs of each tax. Figure 2 depicts the process of reaching taxable capacity according to this second assumption.

In Figure 2 the government will use the first tax exclusively as

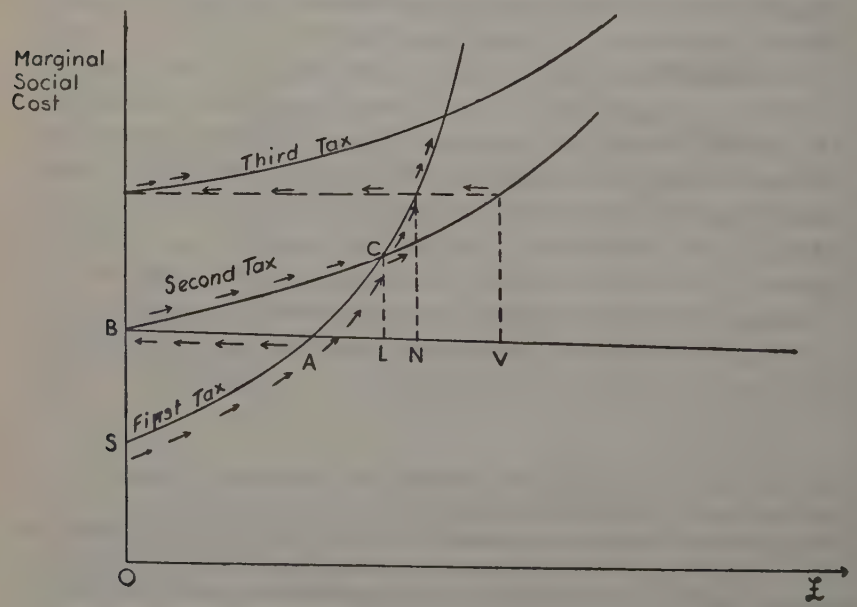

Figure 2

long as its needs for revenues do not exceed BA. After this stage an increase in expenditures will be financed simultaneously by both the first and the second tax, AL by the first tax and BL by the second. If the needs for revenues exceed BA+AL+BL, but fall short of BA + AL + BL + IN + LV, the increase will again be financed by both the first and the second tax (with the first tax yielding an additional LN and the second tax — an additional LV). If this is not sufficient the third tax will be introduced, and so on until the relatively efficient source of additional finance is not a tax at all as ordinarily defined.

Although the process depicted in Fig. 2 is probably more true to life, the assumption underlying it is even less realistic than that of Fig. 1. Obviously the social costs of a specific tax are a function of both total government revenues and of the revenues of that tax.

To repeat, taxable capacity is reached when the marginal social costs of further taxation exceed those of non-tax sources. Clark, let us remind ourselves, did not define taxable capacity, but his reasoning implies a different definition. If our interpretation of his very few economic arguments is correct, his implicit definition of taxable capacity is as that level of taxation where the marginal taxes reduce private spending by less than they reduce output, and thus are more inflationary than deficit financing [11]). Such a level of taxation is possible but it is hard to understand why taxation should be carried that far, for certainly the marginal social costs of taxes should exceed those of deficit financing much before this stage since, after all, "deficits are less painful than current taxes" [12]).

Why is there a Taxable Capacity?

The rather technical definition of taxable capacity as the amount of tax revenues where the curve of the marginal social costs of taxation intersects from below the curve of the marginal social costs of any other source of finance, does not, of course, help to understand why such a point should exist. The main purpose of this paper is an attempt to explain why taxation might reach capacity. That it often does is empirically obvious. In their statistics both Clark and his critics omit the years of the Second World War, probably

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11) This definition is used explicitly by Monteath Douglas "Taxable Capacity and British and Canadian Experience", *Limits of Taxable Capacity*, p. 31.

12) Jesse Burkhead, op. cit., p. 15.

because Clark would admit that during war-time taxable capacity — as implicitly defined by him — is probably higher than normal because of a greater willingness to pay taxes [13]). An inclusion of these years in his two time series might perhaps weaken Clark's claim that taxable capacity is at 25% of national income, but will certainly support the more fundamental claim that taxable capacity is a "practical" concept. For deficit financing was widely used in those years in most countries [14]), just as it was a major instrument of finance during the great depression [15]).

The use of deficit financing in a depression is self-explanatory: Taxable capacity in a depression is extremely low because the marginal social costs of deficit finance are very low (if positive). Wars are also generally associated with deficit — and in this case inflationary — financing, but it is not at all obvious why. The argument that during wars governments need "money" immediately and that tax administrations are not usually well prepared for such emergencies cannot explain the continuous and *increasing* use of deficit financing during long wars. The argument that it is impossible to finance the vast war expenditures by taxation is obviouslv false [16]), and smacks of the "physical" meaning of taxable capacity. Then there are arguments that the government must in emergency bid up the prices of the resources it needs, and that during a war victory comes first, and therefore nothing should be done which discourages incentives to economic activity and that high taxes do so. But all that this implies is that the marginal social costs of taxation are higher during war times since the "social value" of every additional output is that high. Thus taxable capacity during war-

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13) This greater willingness to pay taxes might increase also taxable capacity as defined here, by lowering the marginal social costs of taxation at all levels of taxation. The psychological disutility of paying taxes is certainly a part of the social costs of taxation.

14) Even in United Kingdom where the percentages of taxes to national income were much higher thans elsewhere, the deficit on current account exceeded total tax revenue in 1940, 1941, 1942. See Tables 4 and 5 in R. S. Sayers, *Financial Policy 1939-45* (London: Her Majesty's stationary office and Longmans, Green, 1956), pp. 493-494.

15) Cf. Kuznets, *op. cit.*, pp. 55-6.

16) According to the estimates of William J. Fellner ("Postscript on War Inflation: A Lesson from World War II" reprinted in *Readings in Fiscal Policy*, pp. 137-154) it was possible to prevent any inflationary potential in the U.S. during the war years by an additional proportional income tax of 10%.

time might, in spite the greater willingness to pay taxes which works in the opposite direction [17]), be *lower* than normal.

Taxable capacity is thus a very "practical" concept, and not only in times of war. The problem of whether development should be financed, partly or wholly, by deficit financing [18]), also revolves mainly on differing implicit views on the size of taxable capacity.

That taxation might reach capacity is quite clear, but it is not so clear why. The concept of taxable capacity is based on an assumption that the marginal costs of taxation rise; for if they were constant (not to say decreasing) they could hardly be expected to exceed those of deficit financing and inflation at some level of taxation. It is important, therefore, to examine if and why the marginal social costs of taxation rise.

The costs of taxation are determined by its effects, and the effects of taxation might be divided into three categories: a) income, or purchasing-power, effects [19]), b) distributional effects, c) announcement or substitution effects [20]). These three effects of taxation are, of course, interconnected, but we shall, for the moment, treat them as if they were not.

At first one tends to treat the problem of taxable capacity in terms of the income effects of taxation. Since the marginal utility of disposable income rises with a decrease in disposable income, the marginal disutility of paying taxes increases with the level of taxation. This alone would suffice to explain why the curve of the

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17) See footnote 13).

18) Cf. E.n. Bernstein and I. G. Patel, "Inflation in Relation to Economic Development", *The International Monetary Fund Staff Papers,* vol. II, pp. 363-398, and V.K. R.V. Rao, "Deficit Financing, Capital Formation and the Price Behaviour in an Underdeveloped Economy", *The Indian Economic Review,* Vol. I (No. 1), pp. 55-67.

19) See, for example, John F. Due, *Government Finance* (Homewood: Irwin, 1954), pp. 430-1.

20) The terms distributional effects and announcement effects are Pigou's. (*A Study in Public Finance,* third edition, (London: Macmillan, 1947), p. 55). The term announcement effect is unfortunate since announcement effects have very little to do with the effects of new taxes as contrasted with those of old taxes. Announcement effects are equivalent to the well-known substitution effects. Pigou chose the term "announcement effect" to denote that it depends on "the scheme of formulae in which their own liability is *announced* to each tax payer". *ibid.* Such effects "arise from the presence of a positive rate of tax upon a base subject to greater or less control by the taxpayer". (Earl R. Rolph, *The Theory of Fiscal Economics* (University of California Press, 1954), p. 14).

marginal social costs of taxation rises, and therefore why it must eventually intersect the declining curve of the marginal social benefits of government expenditure, but it cannot help us to understand why there is more than one tax in the fiscal system and why taxes might reach their capacity. For, abstracting from distributional effects, the social disutility of paying taxes presented by their purchasing-power effects is determined exclusively by the size of government expenditures. It is therefore better to speak of the real disposable-income effects of government expenditures, not of taxes [21]). These effects can therefore explain why the first but not why the latter might reach capacity.

If the purchasing-power effects were the only effects that matter, inflation would do just as well as taxation as a method of government finance. Taxes are imposed mainly because the *distribution* of the "burden" of government expenditures brought about by inflation is not considered to be just. The real purpose of taxation is thus to prevent inflation and to distribute the necessary cut in disposable income in a more equitable manner. But if so, distributional effects could bring taxes to their capacity only if taxes were more inflationary than deficit financing.

It is true that taxes are imposed only [22]) to prevent inflation, but inflation is usually rejected as the ordinary means of finance not only because of its effects on the distribution of income, but also because of other results associated with it, which may be termed the announcement-effects of inflation. Both taxation and inflation have distributional effects and announcement effects. The marginal social costs of both taxation and inflation are affected by both their distribution and announcement effects. If the announcement effects of further taxation are socially more costly than those of marginal inflation, it is possible that, in spite of the usually lower social costs involved bij the distributional effects of taxation, the marginal cost of taxation might exceed those of inflation. Announcement effects of taxation are thus what might bring it to its capacity.

The Factors Determining the Size of Taxable Capacity

In the preceding section the different effects of taxation were

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[21]) Cf. Rolph, *op.cit.*, p. 120.

[22]) Taxes might be used in order to change intentionally the distribution of income, but if inflation were allowed, this purpose could be better achieved by distribution as much "newly printed" money as needed to the needy.

discussed as if no interconnection exists between them, but such interconnection is actually the core of the problem. If announcement effects of taxation could be disregarded, then the rule of "minimum aggregate sacrifice" suggested by Edgeworth [23]) would be the only and ideal one to follow. While if distributional effects of taxation could be disregarded, then the poll tax would be an ideal tax, for, if the possibilities of suicide, emigration, and a deliberate decrease in birth rates are excluded, it has no announcement effects. In both these hypothetical cases there would be no limits to taxation. Taxes might reach capacity just because distributional as well as announcement effects are socially important (and are reflected in social costs) so that neither Edgeworth's rule nor a poll tax are acceptable to society. Because of distributional considerations taxes with harmful announcement effects are used, and because of bad announcement effects of some taxes, other taxes which are less equitable are lived with. Thus, our statement that announcement effects of taxation are the ultimate causes for the possible existence of taxable capacity, though correct, concealed the interrelations between announcement effects and distributional considerations.

The main conclusion so far is that the limits of taxation depend on the announcement effects of taxation and of other sources of finance. Announcement effects of taxation, e.g., the effects of taxation on the supply of savings and on the kinds of savings, on the size of aggregate investment, on the level of investment in risky enterprises, on the amount of work supplied and on its intensity, on the methods of business-finance, on the attitude towards wage increases, on the demand for liquid holdings, and all other such effects of taxation which depend on tax formulae rather than merely upon the effects of taxes on real disposable income, naturally would differ according to the kinds of taxes in use. It is impossible, therefore, to discuss here the comparative announcement effects of the various taxes without encompassing the whole field of public finance. The only statement that we venture to submit in this context is that the wider the basis of taxes the less announcement effects they have and the higher their capacity. Taxes on economic surplus (rent) do not have, by definition, any announcement effects. If, for

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[23]) *The Pure Theory of Taxation*, in *Papers Relating to Political Economy* Vol. II (London: Macmillan, 1925), pp. 103-125.

example, the definition of taxable income for income tax purpose included the money equivalents of "psychic income" from leisure, liquidity, safety, non-moneary occupational advantages (or disadvantages), and from any other source, then certainly an income tax could not have the announcement effects — on the supplies of effort, risk capital, occupational distribution, etc. — often associated with it. Income taxes might reach capacity because they are not that comprehensive, and therefore they lower the relative prices of the sources of satisfaction not included in the tax basis. The higher ordinary income taxes are the cheaper leisure and liquidity become, and the more serious the announcement (substitution) effects of the tax-caused changes in relative prices might become. To repeat, the more comprehensive the basis of a tax the higher its capacity because the higher is the element of surplus in the tax payments. Needless to say, effective administration or, more exactly, an administration that is equally effective in covering all parts of the tax-basis is as important as a comprehensive basis. The weaker the tax administration the smaller the element of rent in the tax payments, for, say in the case of an income tax, even if all economic activities are included in the tax basis, some will be administratively better covered than others, and even if the tax is universal its effects would be close to those of a discriminating schedular tax. An important conclusion is therefore that an increase in the tax revenues of a government does not necessarily imply that the limits of taxation are closer. A new tax (or an improvement in the efficiency of the tax administration) might increase the element of rent in the tax system as a whole and thus increase taxable capacity significantly. Taxable capacity is thus definitely not a constant amount or percentage.

The size of taxable capacity depends, of course, also on the announcement effects of inflationary deficit financing as well as on those of taxation, for it is determined by the intersection of the marginal social costs curve of a certain tax with the marginal social casts of deficit financing [24]). The announcement effects of inflation depend on the kind of inflation preferred — open or repressed, on the degree of money illusion in the sense of a greater sensitivity to changes in money income than to changes in real income, on the

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[24]) And to repeat, the whole argument of Functional Finance is a special case of the more general argument presented above: the marginal social costs of deficit financing during a depression are rather low.

relative strength of labour unions, on past experiences of inflation, on balance of payments problems, and so on [25]). They certainly deserve a separate treatment.

It is interesting to note that the size of national income and of national income *per capita* are not among the factors important in determining the size of taxable capacity. Obviously, *ceteris paribus,* the lower *per capita* income, the higher the disutility of a cut in disposable income, and therefore, unless the social benefits of government expenditure are much higher than in richer countries, the smaller the size of the capacity of government expenditures. But this has nothing to do with the size of taxable capacity as defined here. The statement that the size of income *per capita* is irrelevant to the problem of taxable capacity, might contradict the familiar impression that poor and underdeveloped countries must have a lower taxable capacity. This might be true, but for other reasons. Taxable capacity might be relatively lower in underdeveloped countries if, say, because of poor tax administration announcement effects of taxation are stronger there, or if the social costs of inflation are lower in these countries. But the very poverty of underdeveloped country is not relevant to the size of their taxable capacity; if they are too poor to be able to afford more government expenditures, inflationary deficit financing does not solve any purely-economic problem. Given the size of government expenditures it cannot involve lower real purchasing-power effects.

The relation between the distribution of income and the size of taxable capacity is less clear. It might be argued that the more equal this distribution is, the higher taxable capacity. For, as stated above, distributional considerations are responsible for the use of taxes with costly announcement effects. In an economy with a completely equal distribution of income [26]) a poll tax (= a proportional income tax) could not be logically opposed on distributional grounds, and it would be probably used as a single tax which hardly has a capacity.

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[25]) Since the marginal social costs of inflation rise too, and rather quickly, it is more than possible that even though deficit financing should be used to finance a certain increase in government expenditures, it will reach its capacity rather soon and more taxes should be used to finance any further increase in expenditures.

[26]) Where the income of every family would be the average *per capita* income times the number of persons in the family.

Yet this possible effect of an unequal distribution of income to decrease the size of taxable capacity is only an indirect one, since the determining factor here is the social attitude towards equality of income, an attitude which is not a simple function of the existing distribution of income.

One rather important point remains to be stressed; it is, in a way, a qualification of a previous statement to the effect that a truly general tax, having no announcement effects, has an infinite capacity. Since a change in relative prices is a *sine qua non* for shifting of taxes [27]), such a tax, which obviously does not change relative prices, cannot be shifted; everybody can shift a tax only to nobody. But, needless to say, the shifting of any tax might be *attempted at*. When a statement is made that a certain tax is unshiftable, what is meant is that the attempt to change *relative* prices — and thus shift the tax — will necessarily fail, but futile attempts to change relative prices may very well increase at least indirectly the *absolute* price level. Of course, the absolute price level of a given output can hardly change if the money supply and its velocity of circulation are also given, yet there are good reasons to believe that in quite a few countries the monetary authorities are expected to validate pressure-groups decisions making for higher price levels [28]. If prices are overincreased and unemployment develops, the monetary authorities, in a country that adopts as its declared labor policy a continuous and almost absolute maintenance of full employment, have to accomodate itself to the changes in wages and other prices [29]). The terms "wage standard" or "labour standard" were proposed [30]) for such cases where instead of having

[27]) Cf. R. A. Musgrave, "An Incidence", *The Journal of Political Economy*, Vol. LXI, August, 1953, p. 307.

[28]) See Martin Bronfenbrenner, "Some Neglected Implications of Secular Inflation", *Post Keynesian Economics* (Edited by K. K. Kurihara, Rutgers University Press, 1954), pp. 31-58, and esp. pp. 37-40.

[29]) Cf. Gösta Rehn, "The Problem of Stability: An Analysis and some Policy Proposals", *Wages Policy under Full Employment* (edited by Ralph Turvey: London: William Hodge, 1952), esp. pp. 39-44.

[30]) The term "Labour Standard" was proposed by J. R. Hicks, "Economic Foundations of Wage Policy", *The Economic Journal*, vol. LXV, September 1955, pp. 389-404. The terms "Wage Standard" which we prefer, was proposed in a mimeographed paper of Professor A. P. Lerner ("Monetary Policy under the Wage Standard", Jerusalem, Ministry of Finance, 1956, pp. 1-11). Both terms are used by J. H. Richardson, "Wage Policy and a Labour Standard", *The Economic Journal*, Vol. LXVI, September 1956, pp. 431-441.

monetary standards determine the general level of prices, the latter determine the quantity of money. Obviously any equilibrium level of prices is, in a sense, unstable under a wage standard. So long as society adapts itself to existing monetary relationships, these will not undergo any inflationary modifications, but as soon as some social groups refuse to accept the constraint of the monetary relationships prevailing under consideration, more money is poured into the system. Taxes might be among the many possible reasons that might start such a cumulative up-movement of prices and wages, especially of they are not imposed in a way that both labor unions and employers accept its distribution as fair. For under the circumstances each group will struggle to redistribute the national output in its favor by raising wages or prices. Both groups have very little to loose from a new round of the spiral.

To the extent that an increase in taxation is followed by an increase in money supply, taxation is functionless. All that happens is that the banking system lends money to the government indirectly -- through the "agency" of taxpayers — instead of directly in the usual form of deficit financing. The process would have been smoother and less painful if deficit financing were undertaken in the open.

Taxation might thus reach an economic capacity also if, for political reasons, monetary policy defeats the very purpose of fiscal policy.

The conclusion of this paper is simply that taxable capacity is reached when it is wise not to impose more taxes. Such a situation might be arrived at either because the social costs of taxation exceed at the margin those of other sources of finance, or because taxation becomes impotent as an anti-inflationary fiscal tool. Ours seems to us the only consistent definition of taxable capacity, for if no more taxes should be imposed, other means of finance must be used. The fact that at a certain level of taxation, taxes begin to affect the value of money is true and important, and such inflationary effects should be taken account of as parts of the social costs of taxation; but, however high, such costs cannot bring taxation to an economic capacity, unless they are higher than those of inflation. To argue that an economy has reached taxable capacity is to preach for deficit financing, not for retrenchment. An argument for retrenchment must be necessarily connected with the rather different idea of a capacity of government expenditures.

LE LIMITES DE L'IMPOSITION

par AMOTZ MORAG

RÉSUMÉ

L'article définit la capacité imposable comme étant le point où les coûts sociaux marginaux des impôts excèdent les coûts sociaux marginaux des moyens alternatifs de financement, principalement le financement par le déficit. On devrait distinguer le concept de la capacité des dépenses publiques du concept de la capacité imposable, car dès qu'on a décidé du volume optimum des dépenses publiques, il reste encore à déterminer les méthodes de financement. Les impôts atteignent souvent leurs limites, comme le démontrent les pratiques de tous les pays belligérants pendant la deuxième guerre mondiale. Il est peu probable que les effets de l'imposition sur le revenu ou sur la répartition puissent atteindre l'imposition à sa mesure. Le volume de la capacité taxable dépend ainsi des effets de l'annonce de l'imposition et de l'inflation et plus est large l'assiette des impôts, plus est élevé l'élément de surplus dans les règlements d'impôts, plus élevé est aussi le volume de la capacité taxable. L'article discute aussi les rapports entre la valeur et la répartition du revenu national et de la capacité taxable et conclut en mettant l'accent sur le fait que les impôts peuvent voir diminuer leurs effets et de cette façon atteindre une capacité économique si la politique monétaire permet des tentatives constantes de transfert des impôts par la voie de la montée du niveau des prix.

NOTE ON INCIDENCE UNDER MONOPOLY

by PRADHAN HARISHANKAR PRASAD

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This is an study in micro-statics. An attempt has meen made to prove, that for the same rise in price, the total tax receipt, if the tax is collected by an advelorem duty, is higher than if the tax is collected by an specific duty; if the producer of the commodity taxed is a monopolist. Or in other words the incidence on the monopolist is higher, if the tax is collected by an advelorem duty than if the tax is collected by a specific duty, for the same amount of total tax receipt.

While following the mathematical technique of analysis, only one assumption, about the demand of a commodity being the decreasing function of its price, has been made.

Let the demand function of the commodity be given by $p = \psi(x)$ where p = price, x = amount of good and $\psi'(x) < o$

And the total cost of production be given by $\pi = \pi(x)$

Hence, the total revenue of the monopolist, $R = xp = x\psi(x)$

If the tax is collected by an advelorem duty, the total tax receipt, $T_A = x\lambda\psi(x)$ where $o < \lambda < 1$

The implicit condition of profit maximisation by the monopolist under equilibrium gives,

$$\frac{d\ (R - T_A - \pi)}{dx} = 0 \text{ and } \frac{d^2\ (R - T_A - \pi)}{dx^2} < 0$$

$$\text{or } \frac{d\ \{x\psi(x) - x\lambda\psi(x) - \pi\}}{dx} = (1-\lambda)\{\psi(x) + x\psi'(x)\} - \frac{d\pi}{dx} = 0 \qquad (1)$$

In case the tax is collected by a specific duty, the total tax receipt, $T_s = x\mu$ where $\mu > 0$

The profit maximisation by the monopolist gives

$$\frac{d\ (R - T_s - \pi)}{dx} = 0 \text{ and } \frac{d^2\ (R - T_s - \pi)}{dx^2} < 0$$

$$\text{or } \frac{d\{x\psi(x) - x\mu - \pi\}}{dx} = \psi(x) + x\psi'(x) - \mu - \frac{d\pi}{dx} = 0 \quad (2)$$

From 1 and 2 we get,

$$(1-\lambda)\{\psi(x) + x\psi'(x)\} - \frac{d\pi}{dx} = \psi(x) + x\psi'(x) - \mu - \frac{d\pi}{dx}$$

or $\lambda\psi(x) + \lambda x\psi'(x) = \mu$ multiplying both sides by x

$x\lambda\psi(x) + \lambda x^2\psi'(x) = x\mu$

since $\psi'(x) < 0$, hence $x\lambda\psi(x) > x\mu$ or $T_A > T_S$

Hence for same increase in price ($p = \psi(x)$), the total tax receipt, if the tax is collected by an advelorem duty, is higher than if the tax is collected by a specific duty.

LE CONGRES DE L'INSTITUT INTERNATIONAL DE FINANCES PUBLIQUES,

septembre 1958, Bruxelles

I'Institut International de Finances Publiques a tenu son Congrès annuel, sous la présidence du Professeur Neumark, du 15 au 17 septembre dernier à Bruxelles, qui, décidément, fut la capitale des Congrès cette année à l'occasion de l'Exposition Internationale et Universelle.

De très nombreux rapports avaient été déposés au Congrès sur le thème: „L'importance et la structure des recettes et des dépenses publiques en fonction du développement économique des nations". Citons notamment:

Allemagne: M. Senf,
Autriche: M. Kamitz,
Belgique: MM. Ilegems et Defossez,
Congo Belge: M. Carbonnelle,
Egypte: M. Yousef,
France: M. Piatier,
Algérie: M. Fontaneau,
Union Française: M. Leduc,
Grèce: M. Sbarounis,
Haïti: M. Blanchet,
Israel: M. Alexander Katz,
Italie: M. Stefani,
Japon: M. Hanya Ito,
Luxembourg: M. Heinen,
Pays-Bas: MM. Van der Feltz et Beumer,
Portugal: M. Felismino,
Royaume-Uni: MM. Peacock et Wiseman,
Suisse: M. Higy,
Turquie: MM. Dikmen et Bulutoglu.
U.S.A.: MM. Colm et Helzner.

La tâche de rapporteur général avait été assumée par les Professeurs Peacock (Université d'Edinbourg) et Wiseman (London School of Economics).

Ceux-ci firent porter le principal de leur exposé sur la discussion

de la thèse de Wagner selon laquelle les dépenses publiques étaient destinées à absorber une part de plus en plus importante des ressources économiques des nations, au fur et à mesure du développement de celles-ci, par une manière de fatalisme historique qui pousse à une expansion continue des interventions des Etats et des services publics.

Confrontée avec les chiffres procurés par les rapports nationaux, cette thèse s'est heurtée à des observations diverses. Les rapports nationaux ont en effet démontré que l'augmentation des dépenses publiques s'est faite par bonds successifs, principalement pendant les périodes de guerre, et qu'une fois intégrée dans les économies nationales, tant pour les impôts que pour les dépenses, il a été très difficile d'en réduire l'ampleur.

En ce qui regarde les pays sous-développés, des rapporteurs ont mis en évidence que les dépenses publiques ont une tendance à augmenter constamment, mais souvent au détriment de l'équilibre monétaire et de la stabilité économique générale. Le passage de ces pays à l'indépendance politique complète va généralement de pair avec une augmentation accrue de dépenses publiques, parce qu'aux dépenses normales viennent s'ajouter des dépenses de prestige: constitution d'une armée, d'une représentation diplomatique entre autres.

Quant aux pays développés industriellement, les différentes interventions semblaient admettre que le rythme d'augmentation des dépenses publiques était lié à celui de l'augmentation du produit national, mais personne n'a su définir exactement où se situe le point d'équilibre souhaitable entre les dépenses publiques et les dépenses privées.

Quelques uns ont montré que les dépenses publiques — notamment celles d'infrastructure — n'ont été faites dans plusieurs pays qu'après le développement du secteur privé en avait entraîné la nécessité. Dans d'autres pays, les dépenses publiques d'infrastructure ont précédé l'expansion du secteur privé.

Certains ont estimé que la justification et par conséquent aussi les limites des dépenses publiques devraient se trouver dans la comparaison de la productivité de ces dépenses avec celle des dépenses que le secteur privé ferait si le secteur public ne prélevait pas, par taxation, les moyens à sa disposition.

D'autres ont soutenu que les limites des dépenses publiques résident dans la nature même de ces dépenses d'une part, et dans la

résistance psychologique et politique que l'opinion publique oppose au maintien et surtout à l'augmentation de l'impôt d'autre part.

Pour d'autres encore il faut rechercher une limitation au volume des dépenses publiques en vue du maintien de l'equilibre économique et monétaire général, lequel peut être mis en danger par les effets inflatoires de ces dépenses.

Tout le monte dut admettre que l'ampleur des dépenses publiques par rapport au produit national, dépendait de décisions politiques quant à la part du produit de leurs activités que la majorité des citoyens politiquement organisés désirent mettre à la disposition de l'Etat ou estiment devoir retenir pour eux-mêmes. Cette conclusion semble indiquer qu'en raison des décisions politiques qui sont formellement à la base des dépenses publiques, il n'y aurait aucune limite économique à la part des dépenses publiques dans le produit national. Malheureusement le Congrès n'a pu approfondir cette question, faute de temps, mais il est certain que le degré d'information des autorités politiques quant aux conséquences économiques des dépenses publiques, joue un rôle trés inportant.

Qu'il nous soit permis de signaler à cet égard l'intéressante allocution d'ouverture du Congrès prononcée par M. Van Houtte, Ministre des Finances et Président de l'Institut Belge de Finances Publiques, qui a demandé que les économistes collaborent avec les autorités dans l'appréciation des conséquences économiques des dépenses publiques. Il a conclu cette allocution dans les termes que voici: „Je crois que, si l'instinct de sécurité pousse l'homme à accepter une intervention plus large de l'autorité dans la vie sociale avec l'accroissement des charges publiques que cette intervention plus large entraîne nécessairement, l'instinct de liberté qui ne peut manquer de réveiller un niveau général de vie accru, grâce notamment au progrès de la sécurité, doit, par réaction, appeler un renouveau de l'initiative privée et par voie de conséquence, une réduction de la part relative des dépenses publiques dans le revenu national".

Et à la vérité, c'est la conclusion fondamentale que M. Masoin, Secrétaire Général de l'Institut dégagea de l'ensemble des travaux lorsqu'il en fit la synthèse finale: l'homme est partagé entre son individualisme foncier et le sens de sa solidarité à l'endroit des autres hommes vivant en société. L'impôt est la fraction de son revenu qu'il accepte de soustraire à la satisfaction de ses propres besoins pour la satisfaction des besoins collectifs. Ce sens de la

solidarité devient de plus en plus aigu à mesure que l'organisation de la société se fait plus macroéconomique et macrosociale. Les groupes économiques et sociaux se chargent d'ailleurs de le rappeler périodiquement aux individus. Ainsi, sans doute s'explique la pression croissante qu'exercent les finances publiques en un temps qui se caractérise par les économies de groupes et de masses.

Toute la question est dès lors: Comment ce prélèvement est-il fait? Par voie d'autorité ou par voies démocratiques?

Et à quelles dépenses ce prélèvement est-il affecté? A des dépenses de redistribution pure? ou à des dépenses productives? ou à des dépenses économiquement stériles? Car sous peine de freiner l'essort de l'économie générale, il faut bien à la longue que les prélèvements croissants de l'Etat soient affectés à des oeuvres qui, si elles ne présentent pas des utilités pour les contribuables individuels qui en ont supporté la charge, présentent une utilité pour l'économie dans son ensemble, afin que les contribuables y reçoivent une contrepartie globale de l'effort qu'ils ont fait.

Si les hommes sont véritablement solidaires socialement, ils doivent aussi l'être économiquement, trouvant dans le progrès de la collectivité les conditions de leur propre progrès.

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Le prochain Congrès de l'Institut International de Finances Publiques se tiendra à Barcelone du 23 au 26 septembre. Il aura pour sujet „La gestion de la Trésorerie".

M. MASOIN
Bruxelles

BOOK REVIEWS / CRITIQUES

Richard de Falleur et Etienne Sadi Kirschen, *Analyse input-output de l'economie Belge en 1953,* Bruxelles, 1958, 65 pages.

Depuis la guerre, un certain nombre de pays de l'Europe occidentale (la Grande-Bretagne, la Norvège, le Danemark, l'Italie, la France et les Pays-Bas) ont dressé un *Tableau d'input-output* de leur économie (ou *Matrice des relations inter-industrielles).* Des travaux préliminaires sont également en cours à ce sujet en Allemagne, en Suède et en Autriche.

Grâce aux efforts de MM. Kirschen et de Falleur, respectivement Directeur et Chargé de recherches au Département d'économie appliquée de l'Univertié Libre de Bruxelles, la Belgique vient, à son tour, d'être dotée d'une Matrice des relations inter-industrielles pour l'année 1953.

Quoique dressée en marge des institutions officielles, cette matrice ne comporte pas moins de 51 branches alors que celles publiées, par exemple, par les autorités du Danemark et d'Italie comprennent respectivement 14 et 56 subdivisions. Les enquêtes et les calculs nécessaires ont pris plus de deux années d'efforts.

L'intérêt de la publication est renforcé par le fait qu'elle contient des explications claires et fort complètes sur la technique de l'analyse input-output, ainsi que sur l'usage que les économistes, les administrations publiques et les hommes d'affaires peuvent en tirer sur des plans très divers, allant de la prévision et de la politique économiques jusqu'à l'étude des marchés. Des exemples chiffrés illustrent les développements théoriques et en facilitent la compréhension.

La lecture de l'ouvrage de MM. de Falleur et Kirschen ouvre, entre autres, des horizons nouveaux en ce qui concerne l'approche en Belgique de certains problèmes de finances publiques.

A l'aide de la technique de l'analyse input-output de l'économie, il sera par exemple possible d'aborder d'une manière beaucoup plus sûre et concrète que par le passé, l'étude de l'incidence des impôts indirects sur les prix, l'action des dépenses publiques sur l'économie

nationale, l'influence de la conjoncture sur les recettes fiscales, etc... Elle permet également d'asseoir sur des bases plus solides les discussions autour de questions telles que la substitution d'une taxe à la valeur ajoutée à la taxe cumulative sur le chiffre d'affaires.

Bref, la publication de MM. de Falleur et Kirschen confirme l'opinion émise en son temps par un économiste français, selon laquelle la comptabilité nationale ne tarderait pas à se révéler „comme l'une des manifestations les plus éclatantes des progrès de la pensée et de la pratique économiques du XXème siècle."

L'ouvrage peut être obtenu en s'adressant au Département d'économie appliquée de l'Université Libre de Bruxelles.

M. FRANK
Bruxelles

EDITORIAL

The Editorial Staff of this journal wishes to express its deep appreciation of the numerous marks of sympathy received from readers and friends of „Public Finance — Finances Publiques" upon the death of its Director and Editor in Chief. It regards these condoleances as direct tributes to the memory of the late, deeply regretted Dr. Monod de Froideville.

The first number in 1959 has been published under the auspices of a provisional management committee composed of Dr. W. H. van den Berge, Dr. M. Frank and Prof. M. Masoin.

This same committee has also taken the responsibility of bringing out his second number.

However, they now wish to ensure all readers of, and subscribers toe, this journal that a solution is in view for the continuation of the publication of „Public Finance — Finance Publiques" upon a wider and more permanent batis. The provisional committee hopes to be able to give fuller details corcerning this in the next number.

From the articles already selected by the late Dr. Monod de Froideville, the Committee publish in this number four articles they consider likely to draw the attention of a large public dealing as they do with fiscal, monetary and economic problems of present interest.

They wish to thank the authors of these articles and, at the same time, express their regret to the other contributors for not yet having been able to publish their manuscripts, owing to the circumstances.

The Committee wish to assure them that this situation will be remedied in the next numbers.

THE PROVISIONAL COMMITTEE

EDITORIAL

Le Comité de rédaction de La Revue a été extrêmement sensible aux sentiments de condoléances qui lui ont été exprimés par les lecteurs et amis de Public Finance — Finances Publiques à l'occasion du décès de son directeur et rédacteur en chef M. Monod de Froideville. Il les a accueillis comme autant d'hommages à la mémoire du regretté défunt.

Le premier numéro de 1959 a été publié par les soins d'un Comité de gestion provisoire de La Revue, composé de MM. Dr W. H. van den Berge, Dr M. Frank et Prof. M. Masoin.

Le même Comité assume également la responsabilité de ce deuxième numéro.

Cependant, il tient à donner l'assurance dès à présent aux lecteurs et abonnés de La Revue qu'une solution est en vue pour la continuation de la publication de Public Finance — Finances Publiques sur des bases définitives et en même temps élargies. Le Comité provisoire sera probablement à même d'en informer les lecteurs et abonnés à l'occasion de la parution du prochain numéro.

Parmi les manuscrits qui avaient déjà été sélectionnés por feu M. Monod de Froideville, le Comité a retenu pour le présent numéro quatre articles susceptibles d'intéresser un large public, en tant qu'ils portent sur des problèmes d'actualité fiscale, monétaire et économique.

Il remercie leurs auteurs de même qu'il s'excuse vis-à-vis de ceux qui avaient déjà soumis leur article à M. Monod de Froideville de n'avoir pu encore publier leur texte en raison des circonstances.

Il tient à leur donner l'assurance que cette situation sera corrigée dans les prochains numéros.

LE COMITE PROVISOIRE

LES MESURES FISCALES PROPRES A FAVORISER LES INVESTISSEMENTS

par Dr. NERIO NESI — Dr. F. SAVERIO SEGANTI

AVANT-PROPOS

L'Etat doit employer ses possibilitée financières et fiscales en vue de permettre à l'initiative privée de garantir un niveau d'occupation élevé et de développer au maximum la productivité.

L'Etat, s'il veut intervenir d'une façon positive et utile dans l'évolution de l'économie nationale, se trouve dans l'alternative de renoncer d'une part à une partie du pourcentage de prélèvement sur le revenu national ou bien de recourir à la subvention des secteurs de la production qui présentent une situation précaire.

Favoriser une des activités susdites signifie faire confluer vers elle de plus forts capitaux et par cela même exercer une pression pour diriger le choix de l'investissement: ce qui signifie accomplir des actes de portée politique.

L'intervention fiscale dans le domaine des investissements ne doit donc pas être réalisée au hasard des contingences, mais elle doit former un des éléments d'une politique générale.

De ce qu'on vient de dire, il s'ensuit, à notre avis, qu'une finance „neutre" n'existe pas dans la réalité des choses: le prélèvement fiscal et par conséquent la dépense des revenus fiscaux exercent forcément une influence sur la communauté privée.

En effet, ainsi que Aufenburger l'observe dans son „Histoire de l'Impôt", au cours des deux dernières générations la structure et l'évolution de la vie économique ont subi des modifications profondes dues surtout à l'intervention toujours plus étendue de l'Etat dans le domaine de la production et de la distribution.

Cette intervention a été logiquement suivie d'une importance grandissante des Finances publiques, qui doivent pourvoir à la redistribution des revenus fiscaux dans le but d'obtenir un double optimum économique et social, qui, d'une part, puisse assurer une répartition des revenus la plus productive possible et qui, d'autre part, vise à réaliser une structure des revenus qui puisse garantir le progrès social.

Il est désormais prouvé que le progrès économique est de plus en plus lié au rôle joué par les impôts; les causes en sont nombreuses: il suffit de rappeler ici que les nécessités du bilan public sont augmentées au point que les perceptions de l'Etat ont pu atteindre 40% du revenu national total (pour ne pas considérer le 50% qu'on atteignit aux Etats Units pendant la seconde guerre mondiale), tandis qu'on enregistrait un maximum de 15% pendant la période précédant la guerre de 1914-1918.

On a eu ainsi une floraison de nouvelles contributions dans chaque pays; pour nous borner à la taxation des affaires nous ne citerons que l' „imposta sugli scambi" en Italie, la „purchase tax" en Angleterre, l'„impôt sur la valeur ajoutée" en France, l'„Umsatzsteuer" en Allemagne.

Partant la politique fiscale a acquis une importance grandissante qui, l'éloignant de sa finalité la plus orthodoxe — c'est à dire de pourvoir d'argent les caisses de l'Etat —, l'insère dans le tableau plus vaste de la politique du pays.

Celà se produit sous des formes différentes: en variant les charges fiscales pour certains secteurs de production on favorise certaines entreprises; en appliquant des discriminations fiscales, telles que la restitution des taxes sur les marchandises exportées, on favorise le commerce d'exportation de certaine produits; en accordant des dégrèvements fiscaux sur quelques types d'investissements, on oriente l'épargne dans des directions déterminées; en exemptant totalement ou partiellement les investissements dans de nouvelles entreprises, on favorise le développement des industries naissantes.

Tel étant l'état des choses, est-il possible de parler d'une finance „neutre"?

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Le second argument de notre mémoire c'est qu'une politique d'encouragement des investissements est toujours utile, même si celà, en réalité, n'est pas très exact, ainsi que la crise qui troubla l'économie americaine en 1929 l'a démontré et, plus récemment, les dangers d'inflation qu'une expansion excessive a causés en Angleterre et en Allemagne pendant le dernier après-guerre (on renvoie à ce sujet au discours de M. Macmillan alors Chancelier de l'Echiquier — „Financial Times" du 21 janvier 1956).

En Italie, la situation de l'économie nationale, caractérisée par la

nécessité d'industrialiser quelques régions non-exploitées du pays, n'implique pas ces dangers: le „Plan de développement de l'emploi et du revenu pendant les années 1955-1964", c'est à dire le plan de la politique économique nationale, prévoit au cours des 10 ans à venir un investissement, pour l'industrie et pour les activités connexes, de 8.600 milliards de Lires et, en conséquence, l'emploi de 4 millions de travailleurs.

I. EPARGNE ET INVESTISSEMENTS

Le Gouverneur de la Banque d'Italie a achevé son exposé à l'Assemblée du 31 mai 1957 par ces mots:

„Le rythme très rapide du progrès technique, surtout dans quelques secteurs industriels particulièrement intéressés au processus d'automation, la nécessité dans de nombreux types d'industrie de pourvoir à augmenter les puissances de production désormais complètement utilisées, l'exigence d'une application rapide des perfectionnements techniques imposée par la progressive intégration de l'économie italienne dans l'économie internationale, laissent prévoir que la nécessité de financements, dans ce domaine, est destinée à augmenter plutôt qu'a diminuer. Cela pose un grave problème en vue de notre futur immédiat: celui d'équilibrer l'épargne en formation avec les nécessités accrues... Si nous tentions de faire des investissements plus élevés sans prèvoir l'épargne nécessaire et sans l'utiliser le mieux possible, nous n'aboutirions qu' à provoquer l'inflation".

L'étroite interdépendance qui existe entre les investissements et l'épargne pose donc le problème des possibilités d'une politique fiscale destinée à favoriser l'épargne individuelle, c'est-à-dire le problème d'une politique fiscale qui distingue le revenu consommé du revenu épargné, dans le but de favoriser ce dernier.

Cette politique a son fondement dans la théorie selon laquelle la taxation du revenu épargné implique automatiquement un redoublement de l'impôt.

La théorie de la double imposition sur le revenu épargné créée par Stuart-Mill et enrichie ensuite par Fisher et par Einaudi, qui se fonde sur la principe que le revenu épargné est toujours en quelque sorte investi, pose comme postulat fondamental que „le bien épargné et le revenu de l'épargne sont la même chose", et

partant l'impôt sur le revenu investi, une fois cumulé avec celui sur les revenus provenant de l'investissement, constitue une double imposition sur le même bien.

D'où il s'ensuit que l'exemption de l'épargne n'est pas une véritable exemption, mais la réalisation du canon de l'égalité.

De cette conclusion dérive la théorie de la taxation exclusive des consommations, taxation qui devrait nécessairement prendre le caractère d'une imposition indirecte, à cause de l'impossibilité effective, surtout pour les personnes physiques, de discerner le revenu consommé du revenu non-consommé.

Ici il nous intéresse moins d'établir si cette théorie a un fondement économique à elle, ou si elle peut avoir une réalisation pratique. Un ouvrage récent de l'économiste anglais Nicholas Kaldor a rouvert le débat sur ce problème si discuté.

Kaldor propose de substituer au principe de l'inégalité dans le revenu ou dans le patrimoine celui de l'inégalité dans la consommation, et en même temps, par conséquent, l'exemption de l'épargne. Kaldor donne deux justifications à sa théorie, l'une morale et l'autre économique. La justification morale se fonde sur l'idée qu'il est plus juste de taxer les citoyens selon ce qu'ils tirent du fonds commun pour leurs dépenses, plutôt que selon ce qu'ils y apportent par leurs différentes activités productives.

La justification économique est liée à cette tendance de la vie moderne qui pousse vers une consommation disproportionnée tant au volume des ressources disponibles qu'à celui des investissements; d'après celà la fonction de la fiscalité serait de limiter les dépenses privées pour empêcher l'inflation et d'assurer la repartition raisonnable des dépenses entre la consommation et les investissements.

Les thèses de Kaldor ont donné lieu à un débat fort sérieux tant en Angleterre qu'en d'autres pays. En général on a reconnu que leur réalisation constituerait un puissant moyen pour réaliser de rapides changements sociaux. Lauré a adopté ces théories dans son récent „Traité de politique fiscale", en introduisant le principe de „capacité de jouissance".

Mais de plusiers côtés on a démontré l'impossibilité de leur réalisation pratique („Revue de science financière" n. I du 1957 = L.R. Klein en „The Banker's Magazine" mars 1956 = A.R. Prest en „Lloyds Banks Review" octobre 1956 = pour ne citer ici que les travaux les plus récents).

En Italie d'autre part une imposition sur la dépense n'est même

pas réalisable du point de vue constitutionnel et cela pour deux raisons:

— la première est motivée par l'article 53 de la Constitution selon lequel le système fiscal italien est fondé sur des principes de progressivité, ce qui n'arriverait pas si l'imposition prenait la forme d'un véritable impôt indirect sur les consommations;
— la seconde procède du même article 53 de la Constitution, qui établit que tous les citoyens sont obligés de contribuer aux dépenses publiques proportionnellement à leur capacité contributive: il est évidemment insoutenable que la capacité contributive puisse correspondre à la consommation.

Mais alors n'est-il pas possible de favoriser l'épargne individuelle par des mesures fiscales?

A notre avis celà ne peut être réalisé qu'au moyen de solutions particulières en considérant chaque cas séparément, ce qui est d'ailleurs arrivé dans quelques pays. En Angleterre la loi financière de 1956 exempte de l'impôt sur le revenu les 15 premières livres sterling formées d'intérêts provenant de l'épargne déposée dans les Caisses d'Epargne et dans les autres Banques qui investissent les fonds dans les „National Debit Commisioners"; cette mesure, peut-être discutable sur le plan de l'équité, représente surtout un moyen pour encourager l'épargne et pour lutter contre l'inflation.

En Allemagne la loi du 5 octobre 1956 a prorogé d'un an les mesures déjà établies, qui admettent de dégrever l'impôt global sur les revenus imposables, des fonds accumulés à titre d'épargne en les considérant comme des dépenses spéciales; ces fonds ne peuvent pas être retirés pendant une période de trois ans.

Aux Etats Unis le code fiscal de 1954 a réformé le système d'imposition sur les revenus individuels provenant des dividendes actionnaires, afin d'éviter la double imposition des bénéfices qui pesait surtout sur les actionnaires dont le revenu était au niveau le plus bas („The Accounting Review" - juillet 1956).

En Italie l'impôt progressif sur le revenu (qui remonte à 1923) admet (ainsi que d'ailleurs la législation anglaise depuis les temps de Gladstone) la déduction des primes pour les assurances sur la vie payées au cours de l'année et des primes payées par les employés et par les ouvriers aux fonds de pensions afin de s'assurer une pension viagère. La législation italienne exempte de tout impôt le revenu des titres d'Etat.

Les quelques solutions que nous venons de rapporter ci-dessus témoignent, à notre avis, que le système de l'imposition progressive sur le revenu implique la possibilité de favoriser certains investissements en exemptant l'épargne selon un critère discriminatif.

D'ailleurs l'imposition progressive sur le revenu est entrée depuis longtemps dans le système fiscal de tous les pays civilisés et ses effets se sont révélés beaucoup plus positifs que quelques uns n'ont voulu le faire croire.

On sait, par exemple, qu'au cours de ces dernières années, aux Etats Unis et en Angleterre à une augmentation remarquable de la progressivité du système fiscal, (en Angleterre l'income-tax atteint le taux de 44% au niveau de 100.000 livres sterling, et aux Etats Unis le taux de 91% au niveau de 200.000 dollars) a répondu un accroissement de la production plus fort que celui qu'on a eu en des périodes où la pression fiscale était beaucoup moins lourde.

Du point de vue théorique la progressivité a trouvé des justification d'une haute valeur scientifique: nous jugeons opportun de citer la théorie de Seligman, fondée sur le principe de la „faculty", qui introduit, à côté du principe classique du „sacrifice" (si la diminution de l'utilité marginale est plus rapide que l'augmentation du revenu, les taux doivent être progressifs afin de prélever des quantités de revenu égales du point de vue de l'équité), le principe de la puissance économique (l'argent attire l'argent: la puissance économique augmente proportionellement plus que le revenu.)

Mais, dans l'économie de notre exposé, il nous semble que la théorie énoncée par Adolf Wagner et Elmer Fagan revêt une importance particulière: on y considère l'imposition progressive en fonction de ses effets économiques, politiques et sociaux, en tant que jugés favorables à la réalisation de quelques objectifs nationaux.

Ces objectifs peuvent être ramenés en général à l'idée d'„intérêt public" qui se raillie à celle de „bien être" et qui peut avoir une portée plus ou moins grande selon le développement social de chaque pays.

La réalisation de ces objectifs entraine des effets non seulement dans le domaine du fisc, mais aussi dans celui de l'économie, puisqu'ils agissent sur la répartition du revenu, et dans le domaine social (stabilité politique, réduction du désordre social etc...).

Si cette règle vaut en général pour tous les Etats, elle prend une valeur déterminante là où, pour des raisons objectives (pays ayant des régions non-exploitées) ou de contingentement (nécessité

d'orienter l'expansion en un sens plutôt qu'en un autre). l'Etat doit se substituer dans quelques domaines à l'initiative privée.

Si en effet l'Etat se sert des recettes provenant de l'impôt pour opérer des investissements, on aura en principe une substitution des investissements privés par les investissements publics.

Si cela arrive en des pays dont l'industrie est très développée on assistera par conséquent à une diminution injustifiée du capital privé à l'avantage du capital public.

Mais lorsque cela arrive, ainsi que par exemple dans le midi de l'Italie, là où l'initiative privée est tout à fait insuffisante ou manque d'une préparation adéquate, une massive intervention d'investissements de l'Etat ne peut constituer qu'un avantage pour l'initiative privée qui, à côté des entreprises de l'Etat et sous la poussée de leur présence, pourra plus aisément se développer et s'étendre.

II. LES INVESTISSEMENTS DES ENTREPRENEURS

On a vu dans les chapitres précédents qu'il ne peut exister un système fiscal neutre; on a examiné ce qu'on a fait dans quelques pays pour favoriser l'épargne individuelle, fondement indispensable pour qu'on puisse opérer des investissements. On en a tiré la conclusion que c'est à l'intérieur du système d'imposition directe progressive qu'il faut chercher les moyens de favoriser les investissements.

Voyons maintenant ce qu'on a fait et ce qu'on peut faire pour favoriser les investissements des entrepreneurs, sans oublier qu'une politique en cette direction doit viser surtout à faciliter la possibilité d'obtenir les capitaux nécessaires au financement des biens de production.

Suivant le plan établi, on va examiner le problème en s'arrêtant spécialement sur le système tributaire italien, par rapport aux impôts directs et indirects.

Impots directs

Le récent rapport économique que M. le Président des Etats Unis a présenté au Congrès („The Accounting Review" - Juillet 1956) renferme, entre autres, quatre propositions concernant des modifications à la législation fiscale propres à encourager les investissements; ces propositions ont été tranformées en loi; elles nous sem-

blent valables non seulement pour l'Amérique du nord, mais aussi pour les autres pays. Ces propositions consistent dans:

a. *La détaxation des bénéfices non distribués des sociétés de capitaux*
b. *Les Amortissements accélérés*
c. *Le Bilan cyclique: période utile pour la compensation des pertes nettes de gestion*
d. *La déduction des dépenses de recherche et de développement*

Détaxation des bénéfices non distribués des sociétés de capitaux

Dans une époque telle que la nôtre caractérisée par un assez bas niveau de l'épargne individuelle volontaire, l'accumulation des profits de la part des sociétés exerce une action de compensation par rapport à l'exigence qu'une partie du revenu soit destinée au développement de l'équipement productif général.

Le code fiscal américain de 1954, cité ci-dessus, a admis la possibilité de former des réserves de profits jusq'à 60.000 dollars.

En Angleterre la „profits tax" frappe les bénéfices des Sociétés de taux variant selon qu'ils sont immédiatement distribués aux associés ou bien destinés à former les fonds de réserve; dans le premier cas le taux est de 30%, dans le second de 3%.

En Italie où pourtant on s'est engagé dans la voie de l'évaluation strictement analytique du revenu fiscal, grâce aux lois de péréquation fiscale, le problème du traitement fiscal des „réinvestissements internes" n'a pas encore été résolu: le seul obstacle qu'il faut franchir nous semble formé par le principe classique de „l'autonomie fiscale du bilan", mais il s'agit d'un obstacle que les lois de péréquation fiscale ont désormais écarté.

Actuellement dans le système fiscal tributaire italien on frappe de l'„Impôt sur la richesse mobilière" le solde actif de gestion sans tenir compte de la façon dont le contribuable l'utilise; partant les parts du revenu destinées à des investissements sont frappées de l'impôt en tant qu'éléments positifs du revenu imposable.

Cela implique une double charge fiscale lorsque les revenus des bénéfices sont investis en biens productifs non amortissables. On ne peut au contraire parler d'un véritable redoublement à propos des immobilisations techniques, car le revenu investi, tout en étant frappé de l'impôt au moment de sa production, est considéré ensuite comme un élément déductible du revenu imposable en tant qu'ali-

quote d'amortissement; à la fin il en résultera une seule imposition sur le revenu produit par le revenu investi.

Il faut néanmoins considérer qu'au moment de la production le revenu qu'on veut investir (qu'il soit ou non le produit d'autres investissements) est entièrement soumis à l'impôt: c'est à ce moment lá qu'une discrimination se vérifie, d'un côté en matière d'Impôt „complémentaire", de l'autre en matière d'Impôt „sur les Sociétés".

Impôt complémentaire — La législation tributaire italienne frappe de l'impôt „complémentaire" le total des revenus des personnes physiques: cela implique que si une partie des revenus d'une société de capitaux est utilisée pour de nouveaux investissements (et par conséquent non distribuée), elle sera soumise au seul impôt „sur la richesse mobile" et non pas à l'impôt „complémentaire".

Si au contraire il s'agit d'une entreprise individuelle ou d'une société en nom collectif, la partie de bénéfices investie est dégrevée soit de l'impôt „sur la richesse mobile" soit de l'impôt „complémentaire" puisque pour les entreprises individuelles il n'existe pas de distinction entre les bénéfices distribués et les bénéfices non distribués.

Cette situation amène inévitablement une disparité, puisque les investissements effectués par des personnes physiques sont, par rapport à l'impôt „complémentaire" plus chargés que les investissements des sociétés de capitaux.

D'après Einaudi („Lo scrittoio del Presidente" - Torino 1956 pag. 261) cette disparité contribuerait, „avec d'autres motifs, à expliquer la tendance à transformer les entreprises individuelles en sociétés de capitaux".

Impôt sur les sociétés — Cet Impôt institué par la loi du 6 août 1954 n. 603 frappe les sociétés sur la fortune et sur la partie du revenu fiscal dépassant 6% de la fortune, tandis qu'il n'est pas applicable aux entreprises individuelles ou en nom collectif.

L'impôt sur les sociétés doit être considéré, du moins relativement à une partie déterminée, comme propre à frapper d'un impôt complémentaire la partie de bénéfices de la société non distribués.

Il détermine donc une seconde disparité, qui rétablit l'équilibre par rapport à la première en faveur des entreprises individuelles.

Enfin actuellement, d'après la confrontation des lois réglant l'imposition des bénéfices des sociétés de capitaux et des entreprises

individuelles, il est difficile d'établir de quel côte et à l'avantage ou au désavantage de quel type d'entreprise, il existe une disparité dans le traitement tributaire des bénéfices investis.

Si l'on admet que cette disparité n'existe pas, nous sommes d'avis que des diminutions favorables aux investissements dans le domaine des impôts directs peuvent être réalisées en établissant des taux d'amortissement élevés qui englobent, outre la détérioration des installations, le phénomène de la désuétude.

Amortissements accélérés

L'amortissement accéléré représente une des formes les plus propres à encourager les investissements parce qu'il exerce une influence directe sur le développement des investissements en accélérant le rythme de renouvellement de l'équipement; cela vaut surtout pour les entreprises en cours de développement pour lesquelles la possibilité de jouir d'une période plus brève d'investissements peut se transformer en une réduction permanente de l'impôt sur le revenu. Plus généralement, on peut dire toutefois que les amortissements accélérés peuvent augmenter aussi les recettes provenant des impôts parce que la diminution initiale de ces mêmes recettes pour l'Etat sera compensée par l'accroissement futur du revenu imposable.

Le principe que les installations ne doivent pas être amorties par rapport à leur durée physique, mais en fonction de leur durée économique, c'est à dire en fonction de leur possibilité de rendement par rapport au rendement donné par les machines de construction plus récente, a eu le dessus aux Etats Unis, ainsi que nous l'avons déjà fait observer, en Angleterre par l',,obsolescence allowance'' et aussi en Belgique (loi Libaert de 1954) et en Hollande.

Cette théorie a été accompagnée par l'application de la méthode d'amortissement par taux décroissants favorable à la modernisation des installations, puisque dans un bref délai de temps, pour les installations que le producteur possède, il ne restera que des résidus négligeables à amortir; mais cette méthode constitue un moyen efficace pour équilibrer l'accroissement progressif des dépenses d'entretien en provoquent un nivellement du coût; finalement elle constitue un encouragement aux investissements, parce qu'elle réduit la période d'amortissement du coût des biens.

En Italie, l'article 32 de la loi d'impôt ,,sur la Richesse mobile'' établit que seuls les taux d'amortisement industriel constants et la véritable détérioration des installations, sont déductibles.

Les taux d'amortissement économique échappent donc automatiquement à la détaxation, puisque le phénomène de vétusté n'est pas considéré comme une consommation divisible en quotients annuels, mais une perte au moment même où l'insuffisance technique des installations rend nécessaire leur remplacement.

Einaudi observe à ce propos que, dans la situation présente de l'Italie, on impose très souvent, en tant que bénéfices non distribués (c'est à dire en tant que réserves), de véritables dépenses d'amortissement que le Fisc ne juge pas admissibles, et, en comparant cette situation avec celle des Etats Unis d'Amérique, il fait observer comment ce procédé (qui en réalité cause la permanence d'un bas niveau des taux d'amortissement) amène l'industrie italienne à un lent renouvellement des investissements industriels „entraînant une faible productivité et l'impuissance à résister à la concurrence"; afin de redresser ce phénomène il juge souhaitable, pour une politique favorable aux investissements, qu'on établisse des taux d'amortissement élevés (L. Einaudi „Lo scrittoio del Presidente" - 1956 - pag. 262).

Pour atténuer l'effet négatif des taux d'amortissement industriel qui ne tiennent compte que des détériorations annuelles, on a accordé par la loi „de péréquation fiscale" du 11 janvier 1951 n. 25, une diminution de la période d'amortissement de deux cinquièmes, pour les nouvelles installations construites à partir du 1 janvier 1946; à cause de cela l'amortissement des installations dont la durée a été considérée par le Fisc comme étant de 10 ans (10%), peut être effectué en 6 ans par un taux d'amortissement de 16,6 %; de façon analogue, un amortissement calculé pour une durée de 7 ans, est réduit à environ 4 ans, par un taux de 25 %.

Par cette mesure la législation italienne accorde aux nouveaux investissements une accélération de la période d'amortissement: si l'on tient compte que le taux d'amortissement pour la moyenne des entreprises est de 10%, on aura un amortissement des nouveaux investissements en une période de 6 ans.

Mais une politique fiscale d'encouragement à l'égard des investissements devrait tenir compte de l'exigence des entreprises d'accélérer même l'amortissement en vue de la vétusté et de concentrer l'amortissement pendant les périodes de la vie économique où un niveau plus élevé du revenu permet, sans provoquer aucune réaction dangereuse, d'englober dans le prix du produit plusieurs taux d'amortissement.

Celà atténuerait les effets négatifs de l'amortissement fiscal par taux constants fondé sur le coût et qui révèle son côté faible surtout pendant les périodes de dévaluation de la monnaie.

Bilan cyclique: possibilités de compensation des pertes

L'introduction, dans le droit positif italien, du principe de la compensation entre plusiers exercices, qui constitue un fait très remarquable dans la législation fiscale de ce pays, est la preuve de ce que nous avons exposé ci-dessus.

A ce propos il nous semble utile de citer le Rapport que M. Tremelloni, Ministre des Finances à cette époque, a fait sur le projet de loi sur la „péréquation fiscale": „Cependant... on doit constater un fait indéniable: que la division des activités de l'entreprise en périodes annuelles n'est qu'une solution artificielle dès qu'elle risque de donner lieu à l'imposition de revenus qui peuvent ne pas être considérés tels, si au lieu d'un seul exercice annuel on prend en considération une période de temps plus étendue. On a donc pensé à abandonner les critères rigoureux de l'autonomie annuelle dans la détermination du revenu imposable et à permettre que la perte d'un exercise puisse être déduite du revenu des exercices successifs sans pourtant dépasser la limite de cinq ans.

Et M. Tremelloni, encore dans la séance du 21 avril à la Chambre des Députées, revenant sur le même argument, affirmait que: „La possibilité de transporter la perte d'un exercice aux suivants, répond à une plus haute exigence d'équité qui, si elle peut d'un côté faire craindre quelques retentissements immédiats sur les rentrées provenant de l'impôt „sur la richesse mobile" et, par conséquent, sur les impôts qui en dépendent, y compris celui des Sociétés, n'ira pas sans produire par la suite des effets bienfaisants sur l'économie des entreprises et par celà même sur les rentrées fiscales".

Déduction des dépenses de recherche et de developpement

L'impulsion et le financement des recherches scientifiques et des expériences se rapportant à la technique de fabrication jouent de plus en plus un rôle vital dans les entreprises qui sont directement ou indirectement intéressées au renouvellement des méthodes de travail et à la création de nouvelles sources d'énergie.

De ces éléments découle la justification de l'exemption des dépenses entreprises aux fins ci-dessus, exemption particulièrement avantageuse pour les petites entreprises, dont le bilan est plus sensible aux charges que les recherches entrainent.

Le droit à la déduction pour ce type de dépenses est désormais entré dans le droit positif de presque tous les pays (aux Etats Unis le code fiscal de 1954 a offert au contribuable la possibilité de choisir entre une imputation directe et répartie ou bien une capitalisation suivie de l'amortissement).

En Italie ces dépenses sont considérées en général comme des composants négatifs du revenu imposable.

Les seuls problèmes qui peuvent naître pour la déduction sont relatifs à la confusion des dépenses avec le revenu de l'exercice où elles sont comptabilisées.

Et en effet les dépenses susdites sont contenues dans des exercices où elles ne peuvent pas être considérées comme une dépense nécessaire à la production du revenu; ce qui a provoqué des tentatives de classer ces dépenses parmi les frais de première installation qui, selon la législation italienne, sont assujettis à l'impôt; mais le fait ou'on attribue aujourd'hui moins d'importance au principe de l'autonomie du bilan, devrait trancher la question.

Impots indirects

Dans la notice explicative de la thèse on fait allusion aux différents types d'imposition indirecte en distinguant:

a. la taxe „en cascade" qui frappe chaque phase économique sans déduction de l'impôt payé aux stades antérieurs;
b. la taxe sur la valeur ajoutée qui frappe chaque phase économique avec déduction de l'impôt payé aux stades antérieurs;
c. la taxe „ad valorem" qui frappe chaque produit une seule fois à la fin du cycle productif.

Dans ces mêmes notes on fait allusion au fait que, pour atteindre la neutralisation de l'impôt à l'égard des investissements, on pourrait appliquer une politique fiscale propre à réaliser les fins suivantes.

a. dans la taxe „en cascade" (défavorable selon la notice explicative aux cycles de production longs et par cela même aux investissements): accorder des exemptions apparemment discriminatoires, mais propres en réalité à rétablir l'équilibre entre les différents types d'entreprises sur le plan économique;
b. dans la taxe sur la valeur ajoutée: accorder la déduction à chaque stade de l'impôt payé aux stades précédents, en tenant compte non seulement de l'incorporation physique des matières dans le produit fini, mais aussi de l'incorporation financière résultant des investissements;

c. dans l'impôt „ad valorem": accorder des exemptions aux biens correspondant à des investissements.

En Italie la forme actuelle d'imposition „Imposta Generale sull'Entrata" doit être considérée comme un impôt „en cascade": c'est donc à ce type d'impôt que la plus grande partie de notre exposé sera consacrée.

La thèse de la notice explicative soutient qu'en matière de taxe „en cascade" les marchandises produites par des entreprises qui opèrent des investissements doivent être favorisées parce que, l'investissement impliquant un long cycle de production, ces marchandises sont grevées plusieurs fois de la même taxe, d'abord en tant que matière, première puis comme matière accessoire, ensuite comme produit semi-fini, enfin en tant que produit fini.

En réalité en Italie les choses ne se passent pas ainsi: en effet, plus le cycle est long, moins l'„I.G.E." grève le produit fini.

En voici un exemple:

A) *Entreprise ayant un long cycle de production* (des matières premières au produit fini)

Achat des matières premières	L. 100 + 3 de "IGE" =	L. 103
Achat des matières accessoires	L. 100 + 3 de "IGE" =	L. 103
Produit fini:		
	— Coût 103	matières premières
	103	matières accessoires
	300	Fabrication
	506	
	15	I.G.E.
	521	

B) *Entreprises ayant un court cycle de production* (du produit semi-fini au produit fini)

Frais d'achat du produit semi-fini:	103	matières premières
	103	matières accessoires
	150	Fabrication
	356	
	10	I.G.E.
	366	
	366	
Coût du semi-fini:	150	Fabrication
	516	
	15	I.G.E.
	531	

De ce que nous venons d'exposer il résulte que l'entreprise ayant un long cycle de production a un avantage fiscal, en matière d'impôt indirect, sur les entreprises ayant un court cycle de production.

Parmi les critiques qu'on a adressées à l',,I.G.E.", il y en a une qui peut fournir une preuve de ce qu'on a dit ci-dessus: ,,L'I.G.E., du fait même qu'elle grève chaque passage de marchandises favorise les concentrations industrielles, puisque l'organisation productive à intégration verticale exclut les passages intermédiaires". (G. Stammati - La Finanza Pubblica - 1956 pag. 72).

Il est vrai que l'article 7 de la loi du 19 juin 1940 n. 762, par laquelle l',,I.G.E." était instituée, prévoit que, par un décret du Gouvernement, le taux (3 %) peut être augmenté jusqu'au quadruple ,,dans le but de rétablir l'équilibre entre la charge tributaire des entreprises qui accomplissent un seul acte et celles qui accomplissent plusieurs actes sujets à l'imposition".

Dans les règlements ministériels de la loi, on précisait justement que la faculté prévue par l'article 7 avait été accordée ,,en considération de l'éventualité de concentrations industrielles qui, en concentrant dans la même entreprise le cycle de fabrication de certains produits, éliminent le payement d'un ou plusieurs actes économiques".

Mais, comme l'Administration financière italienne ne s'est jamais servie de cette faculté, on peut démontrer qu'en Italie la concentration des stades de fabrication et les investissements ayant un long cycle productif déterminent des discriminations favorables, en matière de ,,I.G.E.".

Des dangers de ce type pourraient exister dans les pays où il est possible de taxer les passages à l'intérieur de l'entreprise; par exemple dans la législation allemande, le passage du produit du filage au tissage est considéré comme un acte économique sujet à imposition, même si le passage est effectué dans la même entreprise industrielle.

Partant, nous sommes d'avis que la neutralité de l'impôt en matière d'investissements existe déjà en Italie et qu'il y a même une discrimination en faveur des entreprises ayant une forte organisation verticale.

Au fond, le problème des impôts indirects sur les échanges par rapport aux investissements n'existe que si on le situe dans le problème plus vaste de l'équité et de la légitimité des impôts sur les échanges.

Cette imposition, par son essence, se réduit en pratique, à un véritable impôt sur la consommation puisque c'est le consommateur qu'elle grève.

Et puisque les impôts sur la consomation sont en réalité „des impôts sur le revenu frappé au moment où il est dépensé par le contribuable" (L. Einaudi - Principi di Scienza della Finanza - pag. 229), il s'ensuit que, si un revenu est taxé une première fois au moment où il entre dans les disponibilités du contribuable et une seconde fois, partiellement, au moment où il en sort pour être consommé, le même revenu finit par être taxé deux fois.

On pourrait en outre avancer la critique, à laquelle on a déjà fait allusion, de l'inconstitutionnalité en Italie d'un impôt sur la consommation qui ne pourrait tenir compte (si ce n'est pour une partie négligeable) de la progressivité établie par la Constitution et du rapport d'inter-dépendance entre l'imposition et la capacité contributive du citoyen.

Ces critiques, qui du point de vue théorique ont un certain fondement, du point de vue pratique doivent tenir compte de la situation italienne caractérisée aujourd'hui encore par l'énorme poids des impôts indirects, si l'on songe que dans le bilan de l'Etat de 1955-56 les impôts indirects ont constitué 37,02% de la totalité des revenus fiscaux de l'Etat.

A cause de cela, tandis que d'une part on doit souhaiter pour l'avenir une politique qui porte sur les impôts directs plutôt que sur les indirects pour garantir plus solidement la progressivité de l'impôt et la subordination de l'imposition à la capacité contributive, d'autre part, dans la conjuncture actuelle et dans la situation particulière où l'Italie se trouve, on ne peut poser le problème d'une discrimation en faveur des investissements en matière d'impôts indirects.

Le problème, d'une portée plus générale, n'est qu'un problème de taux: nous pouvons conclure en citant ces quelques lignes de Stammati: „Enfin, un impôt sur les échanges à taux modéré et uniforme, sans exemptions, sans taux accumulés, ne devrait présenter en pratique aucun inconvénient. Un tel impôt finirait par être neutre et constituerait la compensation des services publics généraux que l'Etat assure, au cours du processus productif, aux producteurs, en leur accordant une diminution générale des coûts" (G. Stammati - „La finanza pubblica" - Bologna 1957).

Ce qu'on a dit à propos de la taxe „en cascade" peut être

répété avec peu de variations pour les autres types d'impôt.

On peut ramener tout cela à une cause qu'on a déjà exposée ci-dessus: le probleme de la charge des impôts indirects ne porte que sur les taux.

La taxe sur la valeur ajoutée, ainsi qu'elle est appliquée en France, admet actuellement la détaxation des impôts sur l'achat des biens destinés à la fabrication et à la vente des produits sujets à l'impôt.

On soutient que ce systeme d'imposition neutralise l'effet des impôts indirects sur les investissements.

A notre avis ce qui forme le noyau de la question c'est la charge globale de l'impôt sur le produit fini: en effet une taxe „en cascade" à taux tres bas est sans aucune doute plus convenable qu'une taxe sur la valeur ajoutée à taux tres élevé (qui tient compte aussi de l'incorporation financiere des investissements).

En supposant que, moyennement, une taxe sur la valeur ajoutée de 14% (avec déduction des impôts sur les investissements) corresponde, en tant que grevant le consommateur, à une taxe „en cascade" de 4%, les problemes économiques rélatifs à l'impôt seront identiques: pour la taxe sur la valeur ajoutée on peut dire, de même que pour la taxe „en cascade", qu'elle aboutit à une discrimination en faveur des entreprises ayant un long cycle de production (qui pourront déduire les impôts payés sur les investissements et qui ne payeront aucun impôt sur les passages opérés à l'intérieur).

Il nous semble en outre que la possibilité de déduction des impôts sur les investissements détermine des discriminations de taux entre les différents produits; discrimination qu'on peut obtenir dans l'impôt „en cascade" par des différenciations de taux selon que les produits sont le fruit d'investissements plus ou moins élevés de l'organisation industrielle.

Nous pensons aussi que même lorsque l'imposition indirecte se réalise par une taxation sur la valeur ajoutée, toute la question porte sur la pression plus ou moins lourde de la charge fiscale, ce qui nous amene à conclure que, même en ce cas là des taux bas d'imposition sont neutres à l'égard des investissements.

Enfin, pour ce qui se rapporte à l'impôt „ad valorem" il nous semble évident que, même à ce sujet, il est toujours possible d'établir un rapport avec les autres types d'imposition et partant les problemes économiques relatifs à l'impôt „ad valorem" sont analogues à ceux que l'on vient d'examiner à propos des deux types d'imposition.

Pour conclure on dira que les trois types d'imposition indirecte représentent différents moyens techniques d'imposition; imposition qui cependant ne change pas sa nature foncière de charge grevant le consommateur.

Si les charges fiscales sont égales, nous sommes d'avis que les effets des trois impositions finissent par être identiques et que, s'ils correspondent à des taux bas d'impôt sur le produit fini, ces mêmes charges peuvent bien représenter les services de caractère général assurés par l'Etat et qu'il faut rémunérer.

CONCLUSION

Un niveau élevé d'investissements présuppose un niveau d'épargne aussi élevé qui puisse le financer; l'un des buts constants d'une saine politique fiscale doit donc consister à favoriser la formation de l'épargne.

Pour ce qui se rapporte à l'épargne individuelle, ayant écarté à priori la possibilité de taxer exclusivement la partie du revenu destinée aux consommations et ayant gardé par conséquent toute sa valeur au système d'imposition progressive sur le revenu total, il faut étendre les mesures déjà existantes, et en créer d'autres propres à favoriser certaines orientations de l'épargne en opérant aussi sur les consommations, même en un sens discriminatoire. Cette dernière exigence, que Ezio Vanoni a formulée dans un de ses écrits, doit être rapportée surtout aux pays, tels que l'Italie ou la France, où le déséquilibre entre les investissements et les consommations est particulièrement sensible.

Pour ce qui se rapporte aux investissements des entreprises, *en matière d'impôts directs,* une fois posée la nécessité que l'imposition soit marquée d'un caractère foncièrement analytique, on devra tendre à augmenter les taux d'amortissement des capitaux techniques de façon qu'on y tienne compte non seulement de la détérioration physique, mais aussi de la vètusté. De cette manière les revenus investis en des biens productifs pourront être déduits intégralement du revenu imposable en un très bref espace de temps.

On devra en outre accorder des facilités particulières aux revenus réinvestis; ces facilités devront être subordonnées aux contrôles techniques et juridiques sur le réinvestissement, qui relèvent de la méthode du système d'imposition analytique.

En matière d'impôts indirects, puisque en réalité la charge de ces impôts se manifeste comme une incidence globale sur le produit fini en tant que fruit des investissements, on devra tendre à obtenir des taux d'imposition les plus bas possible, de façon que la charge puisse représenter pour le consommateur une modeste rémunération des services de caractère général que l'Etat assure à la production.

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TAXATION MEASURES TO ENCOURAGE INVESTMENTS

by N. NESI and F. SAVERIO SEGANTI

SUMMARY

The authors start with stressing the increasing importance of State interventions in the realms of production and distribution. Hence, the important part played by Public finance to-day consists of acting on redistribution of taxation revenues in order to reach two objectives: the most productive distribution of income and a structure of revenues which is bound to lead to social progress.

The Italian economy is characterised, among other features, by stil unexploited regions and by regions not yet sufficiently industrialised. For this economy there is the crucial problem of balancing the development of new savings with the increase in needs. The intimate interdependance of investments and savings poses a problem of taxation policy applied differently to spended income and to saved income.

Nevertheless, there is hardly any possibility of practical use of such extreme theories as those of N. KALDOR who suggests replacing the principle of inequality of income by that of inequality of consumption.

But certain taxation measures of a discriminatory character aiming to encourage savings, are already in force in several countries and even in Italy.

It is within a system of direct taxation at a progressive rate that one should look for means of encouraging investments.

In that respect, four principles already accepted in the United States (see Economic report of the President to Congress in 1956) could also be introduced into Italian taxation:

a. Detaxation of non distributed profit of corporate enterprises;

b. Stepped up depreciation;

c. Cyclical balances;

d. Deduction of expenses on research and development.

The authors study the means of applying these principles to the set up of the actual Italian taxation methods, especially in relation to income tax, corporate income tax and depreciation rules relating to taxation of investment income.

As regards indirect taxes, notwithstanding the different kinds of taxation, such as the turn-over-tax (the Italian I.G.E.), the added value tax, the ad valorem tax, the main problem of the impact of these taxes only lies in their rate. One should tend to obtain the lowest possible rates of taxation, the payment of which would mean, for the consumer, a modest contribution for the general services rendered by the State to enable normal production.

ON THE OBSOLESCENCE OF INCIDENCE

By J. A. STOCKFISCH

Recent discussions of the theory of tax shifting [1]) have generated confusion because the concept of "tax incidence" is ambigious. Taxes actually have a number of distinct "effects" which we can identify logically if not empirically. As most students employ the incidence concept, they treat one or some combination of these effects. Unfortunately, however, not every tax analyst makes clear which effect or combination of effects his incidence concept includes. Consequently different students discuss different things under the impression that they are treating the same thing. This causes much unnecessary controversy.

This discussion attempts to clarify current tax shifting theory. Part I identifies five important "effects" of taxes. With the aid of the distinctions between them, we can then clarify much recent controversy. Part II examines the difference between the "new" approach to tax shifting theory, as advocated by Earl R. Rolph [2]), and the traditional theory of tax "incidence". Parts III and IV take up criticisms of the Rolph approach, and the implications of some of those criticisms. Part V contains some concluding remarks.

I. *Five Effects of Taxes*

It is possible to identify five important effects of taxes. Two of them are basic: the income and price reallocation effects. The other three — the spenders' welfare, incentive, and distributive effects — spring from the first two. These five effects result exclusively from taxes, and taxes alone. We can separate them from the consequences of other fiscal acts like spending, transfer payments, or government debt operations. We do not deny the importance of non-tax fiscal actions. We maintain, however, that it is possible if not necessary to separate the consequences of taxes from other

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1) See Bibilography at the end of the discussion.

2) See Bibliography.

fiscal acts. This point itself is controversial [3]). We shall discuss it further, however, after we clarify the effects of taxes, and show the relationship between them and "incidence".

The Income Effect. - The income effect of a tax is the dollar yield it extracts from the private sector of the economy [4]). When a tax yields the government revenue, private individuals and groups obtain less money for their participation in economic activity. We can explicitly measure the income effect in terms of money flows. A theory of tax shifting should enable us to determine which individuals and groups in the private sector of the economy have less money because of a tax or tax system.

Various taxes exert their income effect differently. Personal income and transfer taxes reduce the income of private individuals *after* they receive money from working or owning resources, or from gifts and transfers. Property and corporate taxes reduce the income obtainable from the ownership of claims against property. Excise and sales taxes lower resource earnings in a complicated way by a shifting process which operates through the price mechanism. Since the theory of excise and sales taxes has evoked the most controversy in recent years, let us explore the income effect as it applies to them.

During any given period, the economic system produces goods and services which are priced in the market and sold for money. The concept of Gross National Product best measures this output. Production of the GNP requires the services of workers and non-human productive agents. In a closed economic system with no excise taxes, total resource earnings would equal the GNP's value. The equality of earnings and spending (GNP) under these conditions is simply an identity which springs from looking at the economic process from different viewpoints.

There is, however, an important exception to the equality between the total product's value and resource earnings. Excise taxes drive a "wedge" between the value of the total product and the value of the services that produce it. This "wedge" equals the tax yield; it equals the income effect.

We may illustrate the income effect of excise taxes in Table I

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[3]) Cf. Earl R. Rolph, *Theory of Fiscal Economics* (Berkeley: University of California Press, 1954), pp. 7-13 for a further discussion of this point.

[4]) Rolph, "A Proposed Revision of Excise-Tax Theory", *Journal of Political Economy*, April 1952, p. 103.

by a simple Robertsonian period sequence. It shows, under alternative taxes during different spending periods, the relationship between spending (GNP) and resource earnings in an economy with a constant GNP. In this approach to monetary and spending analysis, it is assumed that people do not spend the money that they earn in a given period during that period. Rather, spending and the consequential earnings of a given period are made from cash

Table 1

	Period 1	Period 2
GNP (valued at market prices)	200	200
Sales Tax Revenue	0	20
Gross Resource Earnings	200	180
Income Tax	20	0
Disposable Income	180	180

balances on hand at the beginning of the period. During the first period, there are no excise taxes. GNP equals 200. The GNP includes the value of the government "take" of privately owned resource services. Resource earnings equal 200, but a personal income tax reduces disposable income to 180. If the government continues to disburse the 20 it obtains from personal income taxes, the period one situation could remain a stable equilibrium.

At the beginning of period two, however, let us assume that the government levies a number of excise taxes (or a general sales tax) which yield a revenue of 20. Simultaneously, it removes the personal income tax. If total spending (GNP) remains the same, the earnings of resources — wages, profits, and rents — must fall to 180. Although disposable income remains unchanged due to the repeal of the personal income tax, people receive less money in their capacity as sellers of resource services. "Factor earnings" must fall by the amount of the tax yield if total spending is to remain constant. If people seek to sell the same quantity of resource services, earnings rates must also fall. This is not a theoretical or behavior proposition: it is strictly a matter of accounting. Clear recognition of this truism, however, has important implications for tax and fiscal theory.

The Price Reallocation Effect. - The price reallocation effect results from shifting the income effect. Taxes often cause people to allocate their resources differently. The relative prices of goods

and services change[5]). The different allocation of resources also shifts the income effect itself. Let us explore the shifting process as it applies to partial excise taxes.

Tax shifting occurs because the resources that produce the taxed commodity successfully avoid bearing the tax's full income effect. For example, a new excise tax on fur coats means that sellers must turn part of their sales receipts over to the government. Resources in the fur coat industry therefore earn less. Resources leave or avoid the fur coat industry. The supply of fur coats falls, fur coat prices rise. These consequences of tax shifting are well known.

Shifting the income effect occurs because resources obtain alternative employments where earnings are higher. Employment of these displaced resources in alternative lines has two important consequences: First, more resources in nontaxed lines increase the output of other commodities, and their prices fall. Second, the interception of some spending on product by excise taxes lowers the total amount avaiable for resource payments and earnings. Earnings rates and hiring prices fall somewhat as resource owners compete for the somewhat lower level of spending available to them. Thus, the relative prices of products, the allocation of resources, and absolute and usually relative productive service prices differ from those which would prevail if the tax did not exist. The price reallocation effect encompasses each of these changes.

The Spenders' Welfare Effect. - The price reallocation effect confronts spenders (consumers and investors) with different relative prices than those which would exist if there were no taxes. Various spenders, depending on their tastes and preferences, will be made worse or better off. Individuals who prefer relatively large amounts of taxed items whose prices are higher will find they cannot buy as much as they could if the tax system had no price reallocation effect. On the other hand, individuals who prefer nontaxed items, whose prices are relatively lower, will be able to buy more goods and services. Any pattern of partial excise taxes will make some individuals better off and others worse off as spenders[6]), provided everybody in the economy does not have identical tastes and

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[5]) *Ibid.*, p. 104.

[6]) As do other kinds of taxes, including personal income taxes. For example, progressive personal income taxes may affect occupational choice and cause people to avoid some activities and prefer others. The changed labor allocation can thus affect relative product prices.

spending patterns. A partial excise tax system occasions some combination of burdens and benefits, which has a non-monetary or "real" character. Although these burdens arise from the shifting of the income effect, they are distinct from the monetary burden of the income effect itself [7]).

The Incentive Effect. - The incentive effect results from the income effect. Because taxes reduce people's money income, individuals may participate in economic activity more or less vigorously. Confronted with personal income taxes, people may feel compelled to work harder or to enjoy more leisure. Income taxes, as well as corporate and property taxes, may increase or reduce the desire to invest and take risk. We may distinguish between labor and investment incentive effects.

Because taxes change the relative attractiveness of economic and noneconomic alternatives, the incentive effect is actually a form of the price reallocation effect. However, it is helpful to distinguish it from the price reallocation effect. The incentive effect enables us to discuss how taxes affect the total amount of productive resource services that individuals make available in the market place. The price reallocation effect treats the way the tax system affects the allocation of a given amount of productive resources.

The Distributive Effect. - The distributive effect of a tax relates to what students talk about when they speak of "progressiveness" or "regressiveness". Knowledge of it should enable us to answer the question: How does a tax affect the distribution of income and economic power? Despite the concept's importance for policy and equity issues, students have given little attention to sharpening it. Also, "incidence" is often equated with what we term the distributive effect. Again the ambiguity is most acute in the discussion of excise taxes.

First, we may ask what impact a tax has upon the distribution of money income. Does a tax's income effect make the distribution of disposable money income more or less equal? Excise taxes lower the earnings of privately owned resources. For example, a tax on fur coats reduces the earnings of furriers and other resources specialized in the fur coat industry. If the individuals who own these

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[7]) Cf. Break, "Exise Tax Burdens and Benefits", *American Economic Review*, September 1954, p. 583, for a further discussion of the distinction between the monetary burden (income effect) and the non-monetary burden that characterizes the spenders' welfare effect.

resources are relatively poor compared to other resource owners, the tax will have a regressive impact on the distribution of money income. On the other hand, gasoline tax when it reduces the earnings of oil land will be progressive if oil landowners are generally rich. Taxes on products whose production requires large amounts of capital services will probably be more progressive than taxes on products whose production requires large amounts of labor. The extent to which taxes that reduce resources earnings, as contrasted with personal income, are either progressive or regressive in their income effect depends on the distribution of ownership of the resources. It should be sharply emphazised, however, that these types of taxes will be roughly progressive or regressive only. Even a tax which reduces the earnings of oil land may hurt some low-income individuals since there are some oil landowners who are poor as well as many who are very rich.

Another element of a tax's distributive effect arises from the spenders' welfare effect. If an excise tax system raises prices of goods purchased primarily by low income groups, we might say the spenders' welfare effect is regressive. Excise taxes on "luxury" items like fur coats and jewelry, if these items are purchased more extensively by rich people, are progressive in this sense. When they change relative prices, taxes will make some individuals better off and others worse off as spenders. This effect on the relative welfare of different individuals and groups is entirely independent of how the tax affects the distribution of money income itself.

To appraise how a tax system affects the distribution of private "real income", however, it is necessary to combine the distributive impact of both our income and spenders' welfare effects. These effects may possibly offset each other or be cumulative for any individual or group. For example, a fur-coat tax may be regressive in its income effect if most furriers are in low income brackets. In terms of spenders' welfare, however, the tax will be progressive if rich people are the predominant consumers of fur coats. On the other hand, the gasoline tax may be roughly progressive in its income effect because oil-land owners tend to be rich, but roughly regressive in its spenders' welfare effect if the tax also increases somewhat the price of gasoline.

We may recognize a third possible element of the distributive effect of taxes, which operates through the incentive effect. Historically, it occupies an important place in tax literature. Classical

economists like Ricardo, for example, argued that profit taxes reduce the incentive to invest. Through time, society would possess a smaller quantity of capital goods, or a smaller "wages fund". The productivity of investment would rise; the productivity of labor, fall. Hence, the relative shares of total income that workers and non-labor resources obtain could change [8]).

To say anything definite about the distributive impact of the incentive effect of a tax is difficult if not downright speculative. For example, a personal income tax reduces the income people obtain from both working and investing. The tax may stimulate or reduce the incentive *both* to work and invest, although probably by unequal amounts. It may reduce the incentive to work and increase the incentive to invest, or vice versa. Given knowledge of how the tax affects through time the respective supplies of labor and capital equipment, it is then necessary to know something about the elasticity of substitution between the services of these resources before we can say how the tax changes the distribution of total earnings between workers and property owners. Ricardo and his followers, because they accepted both the wages fund doctrine and the Malthusian population theory, provided fairly definite answers to these questions. Most modern writers, however, realize that this kind of theorizing is highly speculative. Therefore, we suggest that the concept of the distributive effect of taxes be confined to the impact of the income and spenders' welfare effects. This is not to deny the importance of the incentive effect itself, which merits special study. We only suggest that the distributive effect not encompass so many possibilities as to make it difficult to say anything about the impact of taxes upon income distribution.

What Is The "Incidence" of a Tax? - When students hold that a tax has no "incidence" unless it yields revenue, "incidence" is similar to our income effect. This is a narrow interpretation. Some

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8) Some writers do not always make clear whether profit taxes reduce capital accumulation because they affect investment incentives adversely, or because taxes reduce the means of financing private investment. All taxes, because they take money from private individuals, reduce the ability of people to invest. In this sense, it can be said that taxes reduce investment, although they need not reduce the incentive to invest. To label the consequences of such lower investment "tax shifting", however, can lead to much difficulty. On this ground, it could also be argued that progressive personal income taxes are shifted because they reduce the incomes of rich people who are most able to invest.

students object to this concept on the ground that it has limited value because it does not treat all of the many problems that concern tax students. We should reject the narrow interpretation of "incidence". We should study the "effects" of taxes. The "theory of tax incidence" should treat all of these "effects" [9]). Here is a broad interpretation of incidence. Yet other writers point out that "it is clearly necessary to have a fairly definite notion of where the incidence is" [10]) — here incidence refers to the income effect itself — in order to treat the "effects" of taxes. Thus we arrive at the position that "incidence" (in the narrow sense — i.e., the money yield of the tax) is only one of the "effects" of taxes, and that its location is frequently necessary for the treatment of other "effects" [11]).

There appears to be a range of "tastes" about the definition and meaning of "incidence". But a core of agreement also exists. We may accept the notion that incidence in the narrow sense, the income effect, is only one of the consequences of taxes — indeed, only one "effect". But then we should hastily add that "incidence" in this sense is not the only object of study in tax analysis. Knowledge of the spenders' welfare effect, the distributive effect, and the incentive effect, for example, is often more important for public policy problems. Frequently, however, analysis of these effects requires some assumptions or, better, a theory treating the income effect and the consequences of shifting it. One way of clearing up the terminological ambiguity is to equate "incidence" with the income effect, and to recognize that examination of the income effect is not all there is to tax analysis. In view of the ambiguity of the "incidence" concept, however, it would seem desirable to eliminate it in favor of the income effect itself. For those who wish to equate "incidence" with all the effects of taxes, there is no harm in doing so. The variety of effects taxes have, however, perhaps places a burden upon those who use such a broad concept of incidence to make clear which effects or combination of effects their concept includes.

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[9]) Cf. Duncan Black, *The Incidence of Income Taxes* (London: Maximillan, 1939), p. 123.

[10]) Harold M. Somers, *Public Finance and National Income* (Philadelphia: Blakiston, 1949), p. 163.

[11]) M. Slade Kendrick, *Public Finance* (New York: Houghton Mifflin, 1951), p. 560.

II. *General Versus Partial Equilibrium Price Theory as a Tool of Tax Analysis*

In his main attack on traditional excise tax theory, Rolph equated "incidence" with the income effect. This was unfortunate at the time. Rolph's critics seemed to have a broader concept in mind when they evaluated his work. When Musgrave, for example, terms "incidence" the manner by which excise taxes change the distribution of *real* income available for private use [12]), he treats the combination of our income and spenders' welfare effects, or, we suggest, the distributive effect. The charge that Rolph's theory is incomplete is correct if one employs a broad concept of incidence, or some complex of effects [13]). Moreover, it has been subsequently demonstrated that excise taxes, if they bear more heavily on consumer items as contrasted with newly produced capital goods, can make consumers "worse off" as compared with people who spend most of their money on investment goods [14]). Had Rolph simply

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[12]) R. A. Musgrave, "On Incidence", *Journal of Political Economy,* August 1953, p. 306. Musgrave also formulates two other incidence concepts: "Relative incidence" and "balanced budget incidence".

[13]) Cf. John F. Due, "Toward A General Theory of Sales Tax Incidence", *Quarterly Journal of Economics,* May 1953, pp. 260, 266.

[14]) Cf. J. A. Stockfisch, "The Capitalization and Investment Aspects of Excise Taxes", *American Economic Review,* June 1954, pp. 287-300; and also Musgrave, *op. cit.,* for development of this point in a general equilibrium setting.

Here is an element of truth in traditional theory. It seems, however, that most students who employed the partial equilibrium theory of excise tax shifting assumed that excise taxes were automatically imposed on consumer items alone. Hence consumer goods prices would be higher relative to newly produced capital goods.

It is not true, however, that excise taxes are confined to consumer items. Office equipment, farm implements, building materials are a few investment goods subjected to excise and sales taxes. On the other hand, large elements of consumer outlays such as food, housing services, and personal and professional services are relatively free of excise and sales taxes. The price reallocation effect of the excise tax system may not be as unfavorable to consumer items, compared to investment items, as the assumption of underlying traditional theory seems to imply.

The generally prevailing assumption that excise taxes hit consumer items alone suggests that the majority of tax students are simply not empirically minded. Or perhaps the failure to explore the facts on this point rests on the belief that taxes which hit investment goods are nevertheles indirect taxes on consumers because investment goods are allegedly "stored up" consumer goods. But the idea capital equipment is a "consumption fund" is a bit of questionable deadwood that springs from Austrian capital theory.

said that individuals as spenders of money ("consumers") did not bear the income effect of excise taxes, that the income effect is not necessarily "incidence", and that excise taxes can also affect the relative status of individuals in their capacities as spenders, his discussion would have been less susceptible to misundertanding. Nevertheless, one of his major contributions was to point up the question-begging elements of traditional tax-shifting theory. The main shortcoming of traditional tax-shifting theory arises from the method of price analysis upon which it rests.

Traditional tax-shifting theory is mainly an application of the Marshallian supply and demand apparatus. Most students for analytical purposes impose an excise tax on the supply curve of the taxed commodity. Whenever the supply curve is less than perfectly inelastic, the commodity's price rises to a degree dependent upon the slope of the demand curve. To the extent the price rises, a portion of the tax is allegedly "shifted forward" to consumers. The higher price of the taxed commodity is an element of our spenders' welfare effect. Whenever the supply curve of the taxed commodity is less than perfectly elastic, a portion of the tax is "shifted backward" to producers of the taxed commodity, which depends again upon the slope of the demand curve. This backward shifting is an element of our income effect. Hence from Marshallian price theory we have the producer-consumer dichotomy and the basis for the distinction between "backward" and "forward" shifting. The period of the late 19th century until recently saw complete rapport between dominant price theorists and tax specialists. One could acquire one's tax-shifting theory either from the footnotes and exercises in works on price mechanics, or from the text of public finance writings. Unfortunately for the cause of tax and fiscal analysis, it was the wrong kind of price theory.

Students applied Marshallian price analysis to tax shifting and accepted its conclusion that consumers bore excise taxes through "forward shifting" for many years. But since the 1930's economists also accepted another notion: that taxes were deflationary. This idea rests on the recognition of the fact that taxes take money from private individuals, which reduces their ability to spend. Fiscal theory developed rapidly. Yet side by side with the new fiscal theory, the notion prevailed that consumers bore excise taxes through higher prices of taxed commodities — that is, excise taxes

were inflationary [15]). The effort to resolve this paradox led Rolph to present his revision [16]).

It is true that taxation of a particular commodity will normally raise its price. The higher price results from a lower supply of the taxed item. Resources that leave or avoid the taxed activity cause the lower supply. Tax shifting cannot occur unless resources have alternative opportunities. This point, of course, is implicitly recognized by the leftward movement along the Marshallian supply curve of the taxed item.

Because the tax displaces resources from one activity, the shifting process necessarily means that additional resources produce nontaxed (or less heavily taxed) items. The output of the latter items increase; their prices fall. More resources in nontaxed lines also lower the earnings of resources (and hence disposable income). They impose a monetary restraint on individuals. The particular tax is therefore deflationary. Thus tax-shifting theory need not be inconsistent with modern fiscal theory.

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[15]) Rolph, "A Proposed Revision of Excise Tax Theory", p. 102.

[16]) The currently-popular "balanced-budget theorem" lends plausibility to the notion that taxes are at least expansionary if not inflationary. Explicitly, of course, the "balanced budget theorem" does not show that taxes per *se* are expansionary, but rather that a combination of taxing and spending attains the result. On the other hand, Professor Lerner tells us — in his presentation of "functional finance" — that taxing is deflationary and that spending is inflationary. One might therefore conclude that the two acts would roughly cancel out. Wherein lies the apparent contradiction?

The "balanced budget theorem" and its seeming bootstrap-lifting impact on the economy rests on a fallacy. It relies on the fallacious assumption that the state can *simultaneously* spend the income it extracts from taxes. Actually, the state cannot simultaneously receive and spend income any more than a private individual can. This is not to say, however, that the state cannot simultaneously increase its spending and taxing. But to do so it must necessarily spend dollars which it has not yet received from the simultaneously-imposed taxes. It must obtain these dollars either from a cash balance on hand at the beginning of the taxing-spending program, or create them. In either case it increases the number of cash claims in the hands of the public, i.e., the money supply.

We must therefore conclude that the consequences of the "balanced budget theorem" are actually the result of three distinct fiscal acts — taxing, spending, and a debt operation — not merely the result of taxing and spending alone. Couched in these terms, its substance amounts to the homely proposition that an increase in the quantity of money may increase total spending. Also, the theorem is misnamed: the necessary debt operation required to bring about its results suggets that it should more accurately be termed the "unbalanced budget theorem".

There is nothing in this approach that is incompatible with the traditional view that taxes may burden some spenders (consumers) by changing the relative prices of goods and services. Our spenders' welfare effect recognizes this possibility. But the tax will also benefit spenders who prefer nontaxed items the prices of which fall because of the shifting process. There is an element of truth in traditional theory, although its validity rests on conditions which were seldom made explicit.

Analysis of both the direct price-raising effect of the tax upon the taxed item and the tax-caused price lowering impact upon other items, requires an *explicit* recognition of the general interdependence of the price system. The shortcomings of the Marshallian demand-supply apparatus for analyzing taxes spring from the Marshallian method itself. It is impossible, with the partial equilibrium supply-demand apparatus, to treat the impact of tax-displaced resources upon other parts of the economy. Displaced resources, to be sure, "lie behind" the tax-caused, leftward movement along the Marshallian supply curve. That few students ever asked what became of them testifies well for the strong hold Marshall's work has had on economic thinking [17]). A general equilibrium pricing approach, however, can handle the impact of tax-displaced resources upon other parts of the economy. An explicit use of the Walrasian method and development of its fiscal implications constitutes Rolph's major contribution. Only in an intellectual environment dominated by the Marshallian tradition would his results seem startling and "unorthodox".

It is, of course, possible to employ the Marshallian theory for

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[17]) A notable exception to this tradition in tax thinking was Knut Wicksell, *Finanztheoretische Untersuchungen,* (Jena: Gustav Fischer, 1896).

Wicksell was both an Austrian and a Walrasian in his economic theorizing. He objected strenuously to the producer-consumer dichotomy as a tool of tax analysis. He endeavored to determine which individuals as "producers" received less money under different types of taxes. His was essentially an effort to determine who bore the income effect through the shifting process. Unfortunately, at the time he wrote his *Untersuchungen,* Wicksell was more of an Austrian than a Walrasian. Also, he was a Malthusian in population and wage theory. Consequently, all taxes — with the exception of those hitting Ricardian land rents — would either lower profits and hence reduce capital accumulation (a consequence of the Austrian variant of the wages fund doctrine) or affect wages and directly alter the labor supply. His general equilibrium tax-shifting theory was therefore little more than a sophisticated version of Ricardo's tax analysis.

the treatment of excise taxes. Those who employ it, however, should be carefully aware of the assumptions implicit in its use, and the limitations which follow from those assumptions. The crucial assumption in the Marshallian supply-demand approach is that the industry (or commodity) taxed uses an insignificant portion of the economy's total resources [18]). On this ground, it is perfectly consistent to ignore the impact of tax-displaced resources on other parts of the economy. When we ignore the impact of these resources the Marshallian dichotomy between "producers" and "consumers" is the only way of providing "positive" answers about the "incidence" of the tax. But the assumption that an industry uses only an insignificant portion of the economy's resources has important implications for fiscal theory and policy. They are: (1) the tax itself is insignificant, (2) its income and consumer welfare effects are insignificant, and (3) its "incidence" is therefore insignificant. So why bother to analyze it in the first place? On the other hand, to employ a one-at-a-time Marshallian treatment of numerous partial taxes, and to generalize the partial results for the entire economy provides no satisfactory answers for tax policy questions: It is simply a fallacy of composition which leads to the conclusion that taxes are deflationary because they raise prices. Thus, whatever value Marshallian price theory may have for some purposes, it is worse than nothing as a tool of tax analysis [19]).

III. *Backward versus Forward Shifting in a General Equilibrium Setting*

Many students now seem to agree that tax-shifting theory requires a general equilibrium orientation. Certain recent "general equilibrium" theories, however, raise further questions about the meaning of "incidence". Professor Musgrave, for example, retains the traditional distinction between "backward" and "forward" shifting of excise taxes [20]). But in a general equilibrium framework,

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18) Cf. J. A. Schumpeter, *History of Economic Analysis,* (New York: Oxford Press 1954), pp. 990-8, for a recent restatement of these aspects of Marshallian theory.

19) For a similar criticism of the Marshallian approach to taxation and fiscal theory, cf. Wicksell, *op. cit.,* p. 9.

20) "On Incidence" *op. cit.,* pp. 310-313.

this distinction creates problems about the content of "incidence" and the nature of tax causation itself.

Excise taxes drive a wedge between the total value of the product sold (GNP) and total resource earnings. Complete "forward shifting" requires conditions illustrated in Table 2 with a Robertsonian period sequence.

Table 2

	Period 1	Period 2
GNP (Valued at Market Price)	200	220
Sales Tax Revenue	0	20
Gross Resource Earnings	200	200
Personal Income Tax	20	0
Disposable Income	180	200

In this model we assume that the state (at the beginning of period two) eliminates a personal income tax, and raises the same dollar revenue with excise taxes. The GNP includes the government's "take" of private resource services. If the excise taxes are to be "shifted forward" (or if private resource earnings are not to fall), and if total output remains the same, GNP or total spending must rise by the amount of the tax yield (or income effect). The general price level must also increase. On this basis, some hold that consumers bear excise taxes through forward shifting [21]). It also appears that taxes are indeed inflationary. Some might argue that if the government does not spend the excise tax proceeds, however, the tax will exert a deflationary impact during succeeding periods. In Table 2, this deflationary impact would require that the government increase its total tax revenue, e.g., by retaining all or part of the income tax employed in period one. In this instance, it is the *cash surplus* which is deflationary, not the tax. Existence of a cash surplus requires some combination of fiscal acts, even if one of them is the negative act of not spending. To demonstrate that

21) This appears to be Due's reformulation of the traditional theory. See his "Toward a General Theory of Sales Tax Incidence", *op. cit.* Due would also apparently attribute to the tax, and define as "tax incidence", the resulting diversion of real goods and services from private uses to government should the government increase its demands by an amount equal to the tax yield. The combined effect of the tax and the increased "real take" of resources by government is what Musgrave, see "On Incidence", *op. cit.*, terms "balanced budget incidence".

some combination of fiscal acts is deflationary is not to demonstrate that taxes per se are deflationary. It is the last proposition which constitutes an element of modern fiscal theory. Either tax-shifting theory must be consistent with this proposition, or else fiscal theory requires modification.

This "forward shifting" case raises important questions about tax causation. It is clear that total spending must rise by the amount of the tax yield if resource earnings are not to fall. Hence either the quantity of money or its income velocity must increase during period two. Two major lines of causation may operate. First, producers and sellers simply raise prices by the amount of excise taxes on their respective products. Spenders insist upon having the same physical quantity of goods and services. They either draw upon idle cash balances of borrow newly created money from commercial banks. We may ask, however, why producers did not raise prices before the excise taxes were imposed? Obviously a monetary environment existed before the tax which would have permitted producers to raise prices without fear of lower physical sales. The economy is "inflation prone" to begin [22]). A second line of causation may run as follows: Producers raise prices by the amount of taxes. Spenders this time, however, balk. They purchase less physical output at the higher prices. Output falls and unemployment results. The government then employs expansionary fiscal measures, which raise the GNP to the necessary higher full employment level [23]).

We do not deny that either or some combination of these chains of causation (at least in a less extreme form) may in fact occur. But should we attribute such possible observed results to taxes, and call them "tax incidence"? It would seem more accurate to say that a number of other forces are responsible for the final outcome

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[22]) To hold, on the basis of oligopoly theory, that producers did not previously raise prices because they were not sufficiently interdependent would not explain why the tax per se introduces a degree of interdependence sufficient to cause them to raise prices after the tax. Furthermore, to demonstrate how a single oligopolistic industry may spontaneously raise its price by the amount of a tax on its product is not to demonstrate that an economy composed of oligopolistic industries will experience a general price level rise with the imposition of a general sales tax due to oligopolistic behavior per se. Such an explanation extends the concept of "mutual interdependence" in oligopoly theory from a "few" to many firms.

[23]) For a detailed discussion of these outcomes, cf. Break, *op. cit.*, pp. 585-591.

labeled "forward shifting". Among them are arbitrary business pricing policy (monopoly power), downward rigid factor prices (possibly still more monopoly power), and in all instances an expansionary monetary or fiscal policy. Non-tax forces are therefore responsible for the "incidence" which results whenever the income effect of excise taxes is completely or partially "shifted forward". The tax itself is merely an instrument through which deeper nontax forces operate [24]). Such inflationary and unemployment outcomes are important. They are certainly an object of study and research for students of fiscal economics as well as other specialists. But we urge that not everything which can happen in a complex world where the state imposes taxes be labeled "tax incidence". Such a practice blurs distinct causitive forces, each of which are subject to separate control for policy purposes.

IV. *Government Spending as an Element of "Incidence"*

We have not covered alle variants of "incidence" found in tax literature. Some students hold that "incidence" should include the impact of spending the tax yield. By spending the tax yield, it is often assumed that the government extracts from the private sector of the economy a quantity of goods and services whose value equals the tax yield [25]). This transfer of resource services from private to government ends is held to be part of the tax analyzed. The "theory of tax incidence", therefore, should enable us to determine which

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[24]) The argument that the income effect of excise taxes are "shifted forward" to consumers in the form of a higher price level, and are hence inflationary, is similar to the argument that trade unions "cause" inflation through their wage demands and a following cost-price "spiral". The question has been raised in the trade union case, however, whether the "inflation" results from underlying monetary-fiscal conditions which make it possible for both employers and workers to ignore the constraints that noninflationary conditions would otherwise impose. Cf. Walter A. Morton, "Trade Unionism, Full Employment, and Inflation", *American Economic Review*, March 1950, pp. 13-39, for a discussion of this point.

[25]) Cf. Paul Wells, "A General Equilibrium Analysis of Excise Taxes", *American Economic Review*, June 1955, p. 353; and H. P. B. Jenkins, "Excise Tax Shifting and Incidence: A Money Flows Approach", *Journal of Political Economy*, April 1955, pp. 142-43. Cf. also, Musgrave, "On Incidence", *op. cit.*, whose concept of "balanced budget incidence" defines the combined impact of an increased tax revenue and an equal increase of government spending.

individuals in the private sector bear the "real cost" of government itself. It also follows, if we adopt this concept of "incidence", that a "general equilibrium theory of incidence" would require both knowledge of government demands for goods and physical resource services, and the effects of those demands upon economic forces [26]). We question the value of this concept of incidence for two reasons: First it trammels scientific analysis; second, it is unrealistic.

It is not correct to assume that the government obtains a dollar's worth of product for every dollar of tax revenue. Frequently, tax revenue is used to retire government debt. In modern fiscal settings, large transfer payments to private individuals offset tax yields. In either case there is no loss of "real income" to the private sector of the economy [27]). If we equate "incidence" with the social cost of government, we should logically conclude that where specific tax yields "finance" debt retirement and transfers there is no "incidence". Conversely, if we push the taxing-resource acquisition association to its other logical extreme, we would also have to conclude that there is no social cost of government by the amount government purchases exceed tax yields. This, indeed, would be a retrogression in economic thinking.

Finally, if we are inclined to equate tax "incidence" with some "real" magnitude commensurate with the resources diverted from private to public use, and thus view it as some "burden" that consumers bear, we should also logically recognize that government-provided services benefit consumers. The taxing and spending in combination creates both benefits and burdens. The burden is measurable in terms of what people forego as private spenders because resources are employed to provide "collective" goods and

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[26]) Wells, *op. cit.*, pp. 356-7.

[27]) Some might point out that a given tax and a given system of transfer payments of equal amounts would evoke a changed distribution of "real income", by which some individuals lose and others gain. "Incidence" in such a framework might be considered the loss of "real income" suffered by those who bear the income effect of the tax, and would be measured by the income effect provided we can be sure that those who bear the income effect do not also receive some of the transfer payments. In the case where a person both bears the income effect of a tax and receives transfer payments — e.g. a resource owner who is a war pensioner — "incidence" depends both on the tax shifting process and the transfer payments system. It becomes a function of two distinct fiscal acts which are not functionally related. Nevertheless, however ambiguously we may define "incidence", its nature depends on who bears the income effect.

services like jet bombers and public education. As such, the burden is measurable fairly objectively: It is simply the proportion of the economy's resources employed to provide government services and products. But how do we measure the benefits? What, for example, is the value of the Strategic Air Command to each of us individually, or collectively? Indeed, the nature of most government-provided services is such that their benefits cannot be measured in terms of foregone alternatives as reckoned in the price system. If the value of these services to individual consumers could be measured with prices, private business firms could provide them and many of our most serious political problems would be solved. But the benefits nevertheless exist. Their existence offsets the "burden" taxes impose. Our inability to measure the benefits of government-provided services, however, causes the incidence concept the taxing-spending association implies to become meaningless. Or does this mean we must suspend analysis of fiscal economics until we have a "positive" theory of welfare economics?

These remarks assume that it is possible to identify the uses to which tax dollars are put. Actually, this identification is seldom possible. Tax yields go into a government cash balance. The government makes its disbursals from a cash balance. Taxes and each type of disbursal — spending, debt retirement, and transfer payments — are distinct fiscal acts. As separate fiscal acts, they exert fiscal and monetary forces peculiar to themselves. There is no reason why we cannot examine each of these acts and their respective forces separately. Indeed, their separate and through analysis — especially of taxes — is necessary to treat any particular combination of fiscal acts. We may demonstrate this point by reference to a special case Professor Jenkins adumbrates [28]).

Table 3 depicts two alternative fiscal situations. In both periods, total spending (GNP) and its breakdown between private and government spending are equal. In both periods, the government balances its budget in the sense that its tax revenue equals spending. In period one, however, the government obtains its revenue from a personal income tax. In period two it employs some pattern of excise taxes which yield the same revenue.

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[28]) *op. cit.*

Table 3

	Period 1	Period 2
GNP	$ 200	$ 200
Excise Taxes	0	50
Resource Earnings	200	150
Personal Income Tax	50	0
Private Disposable Income	150	150
Number of Workers	200	200
Equilibrium Wage (Before Tax)	1.00	.75
Private Product	150	133
Government Product	50	67
Price Level of Private Product (Period 1 index = 100)	100	112

Both periods portray a "monetary equilibrium". The different taxes employed to finance a given level of spending, however, produce a marked difference in other respects.

To illustrate this difference, we assume for simplicity that there is only one type of resource in the economy: labor. In the model, 200 non-specialized workers earn the entire $ 200 total spending during period one. The equilibrium wage rate is $ 1.00. Upon these earnings the government imposes income taxes that yield $ 50. Private individuals therefore have $ 150 of disposable income. Spending $ 50, the government can hire 50 workers to carry out its aims. Private individuals obtain the services of the remaining 150 workers to satisfy their wants (these respective amounts are labeled "private" and "government" product in Table 3).

At the beginning of period two, suppose the government repeals its personal income tax, and imposes a set of excise taxes on the private product. Let us also assume that the economy immediately adjusts through the mechanism of the price system. Due to the "wedge" excise taxes drive between GNP and the total resource earnings, and because we assume no increase in total spending, resource earnings now fall to $ 150. (Disposable income remains unchanged due to repeal of the income tax.) The 200 workers must now compete for a lower level of spending available for resource payments [29]). The wage rate therefore falls to $ .75. With the

[29]) We are not making any particular assumptions about the nature of the excise tax system. It may be "general" or it may be a number of random, specific taxes which yield the required revenue. If it is a non-general tax system,

government still spending $ 50, it can now obtain the services of 67 workers. Private individuals, spending their $ 150 (which is available from period one), can only obtain the services of 133 workers, because excise taxes intercept $ 50 of their spending before it is available for resource payments. The situation depicted in period two can continue to be a stable equilibrium.

It is clear that the private sector of the economy ("consumers") is "worse off' in period two as compared to period one. Moreover, the income effect of the excise taxes is completely "shifted backward" to private resource owners. But this still does not change the fact that private individuals as consumers are "worse off" in period two than they were in period one. Is the extent to which the private sector is more "worse off" in period two an element of the "incidence" of an excise tax system as compared to personal income taxes?

We would hold that the additional "real burden" upon private individuals in period two results from government spending. But we would hastily add that the tax system itself can affect the terms of government spending. What we have in period two is a combination of our income effect and spenders' welfare effect. As a purchaser the government enjoys a "favorable" spenders' welfare effect under a system of excise taxes, (we are assuming that governments impose no excise taxes on their own purchases). The private sector, therefore will always suffer an unfavorable spenders' welfare effect from a system of excise taxes as long as the government purchases services of privately owned resources, whether those purchases are made from excise tax proceeds or from any other source of funds. Because the "wedge" of excise taxes lowers the hiring prices of resources, the government obtains services and products at somewhat lower prices than it could if it used other forms of taxation. Under a system of excise taxes, therefore, the government either can obtain more resources from the private sector of the economy with a given amount of spending, or it can obtain

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it will cause the prices of nontaxed private goods to be lower. This possibility does not change the main argument continued in the text.

Also, the assumption of a "one factor" economy does not change the main argument. If there were two types of resources — say labor and property — the excise tax system would reduce the earnings of both resources, although probably by unequal proportions.

a given quantity of resources with a smaller level of money spending.

For this reason, therefore, it appears that excise taxes will always impose an unfavorable "spenders welfare effect" upon the private sector of the economy whenever the government acquires privately-owned resource services or products produced by the private sector. The 12 percent rise of the private product's price level shown in Table 3 reveals this excess burden. In this sense we might indeed say that excise taxes are "inflationary". The "inflation", however, arises from the price reallocation effect of excise taxes, not from any monetary force.

Clear recognition of these interactions between excise taxation and government spending have several implications. First, it indicates that Rolph's original strictures against the conclusions of traditional theory are not entirely valid. Excise taxes can make private consumers "worse off" relative to a personal income tax. They can increase the price level of private goods through the price reallocation effect. These consequences are elements of truth in the conclusions of traditional theory, although they follow from an entirely different set of reasons. Another important implication of this outcome is that whenever a government relies importantly on excise taxes, monetary measures understate the social cost of government. For example, if in period two the government desired only to obtain the service of 50 workers (as it did in period one), it would find that it could hire them with a smaller money outlay under the excise tax system than was necessary when it used personal income taxes [30]). The lower money budget would give an illusion of government "economy". When it imposes taxes that change resource service prices, the government tips the money terms of purchases in its favor [31]).

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[30]) For example, if in period two the government imposed excise taxes on private product which yielded $ 40, private resource owners would obtain $ 160. With 200 workers, the equilibrium wage rate would be $ .80. The government could hire its 50 workers at that rate. Because of the repeal of the income tax, and the lower excise tax income effect, private disposable income would be $ 160 instead of its previous $ 150. Spending this higher disposable income on the unchanged private product produced by 150 workers available for the private sector would increase the price level of private goods.

[31]) If I understand Professor Jenkins correctly (cf. *op. cit.*, pp. 120, 133-41), he would label the private price level rise "forward" shifting, and recognize the income effect's impact on resource earnings as backward shifting. This distinction

Although we hold that we should separate the analysis of taxes from those of other fiscal acts, we do not hold that non-tax fiscal acts are unimportant. Indeed, they are so important that they, too, merit intensive, rigorous analysis. There seems to be no reason why we cannot ask about the income, distributive, and price reallocation effects of government spending. Nor is there any reason, for example, why we cannot subject the incentive effects of government transfer payments to special, intensive scrutiny. Such a separation of analysis will give each major type of fiscal action the rigorous treatment it deserves. Furthermore, such a breakdown will be more in accord with the political facts of life which suggest that legislative bodies do not pass a tax bill, or stipulate specific tax yields, every time they pass legislation that requires financing. It is rare that explicit recognition of a bald institutional fact enhances scientific analysis. But here is one instance where it does.

V. *Conclusions*

Thus far we have mainly discussed the effects of taxes alone. We have attempted to show that taxes, distinct from other fiscal acts, exert a number of important effects which are independent of other fiscal actions. The analysis and understanding of these effects, however, is vital to the treatment of fiscal economics generally. Our important point is that the concept of "incidence" is either too vague or crude for purposes of analyzing taxes. It is vague because many students do not sharply define which effect or combination of effects they discuss when they use the incidence concept. The concept is crude if by "incidence" a person means all of the effects — as we have outlined them — of taxes. The complexities of the tax shifting process and the effects of taxes upon people's behavior are too subtle and important to treat with a concept that is either vague or

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differs from the one Professor Musgrave employs in a general equilibrium setting. In the case portrayed in Table 3, where the tax yield is fully reflected in lower total resource earnings, Jenkins would have roughly $ 12 "shifted forward to consumers", and $ 50 "shifted backward to producers". The "total tax load", or "incidence", therefore, equals $ 62. The "incidence" exceeds the tax yield. The concept thus becomes ambigiuous due to the need to relate it to price indexes. It appears that Jenkins lumps together both our income and spenders' welfare effects.

crude. Finally, if we also define "incidence" to include the impact of other fiscal acts, it becomes even more crude and vague. We suggest, therefore, that we scrap the "incidence" concept and treat each of these effects thoroughly. They may be combined in whatever way seems necessary or convenient for treating any particular problem.

Our entire discussion is based on the methodological position that it is possible to analyze and say something about the effects of taxes as distinct from other fiscal acts. A negative implication of this view is that it is not necessary to say anything about what is done with the tax proceeds in order to say anything about the effects or "incidence" of a tax. To be sure, governments do not tax alone, nor do they impose a particular type of tax alone. Governments also spend money to acquire products and resource services, they give money through a system of transfer payments, and they buy claims through their debt operations. The dollars a particular tax raises may be used for any or all of these purposes, although there is no way of knowing in fact just what is done with the specific dollars the government raises from a given tax. We freely recognize these fiscal facts of life. But in doing so, it does not follow — as many students maintain — that the tax analyst must take account of what is done with the proceeds, or that the "incidence" of a tax depends on how the government spends tax dollars.

A recognition of the possibility that government may "do" something with the tax proceeds means that tax analysis is only one phase of fiscal economics in its entirety. There is nothing in the position that we analyze taxed separately that implies that we cannot analyze the consequences of government spending, transfer payments, or debt operations. Indeed, if only because we lack a completely integrated theory of fiscal economics, the best way to attain a more satisfactory understanding of government finance is to separate the major fiscal actions of government and examine each of them much more intensively than we have thus far. In order to evaluate the consequences of a given fiscal policy, it is necessary to apply theories that treat taxation, spending, transfer payments, and debt management — indeed, fiscal economics in its entirety. Tax analysis is only one phase of this broad subject. If on the other hand students insist on attributing to a given tax the consequences of some or all the possible uses that may be made with the specific tax dollars, and labeling this "incidence", then the

subject of "tax incidence" becomes fiscal economics in its entirety. Perhaps it is not too important what we call the subject we are all interested in. But whatever we call it, it does not seem inappropriate to insist that each of the important fiscal acts and taxes merits respectful and intensive analysis. And for the time being, the concept of "incidence" means too many things to be of much use to either tax specialists or students of general fiscal economics.

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DU CARACTERE PERIME DE L'INCIDENCE

par J. A. STOCKFISCH

RÉSUMÉ

La notion „incidence de l'impôt" n'est pas claire. Son manque de clarté est spécialement troublant dans l'analyse de la translation de l'impôt. L'objet de la présente étude est de mettre au clair la théorie habituelle de la translation de l'impôt en montrant comment des conceptions différentes de l'„incidence de l'impôt" ont pour conséquence la plupart des différences entre théories opposées de la translation de l'impôt, ainsi que des contradictions apparentes.

Il est nécessaire de rejeter la notion d'„incidence de l'impôt", ou plutôt il est devantage fécond d'identifier les „effets" des impôts. La présente étude détermine cinq effets principaux et montre comment divers auteurs rendent implicitement l'incidence équivalente à un de ces effets ou à une de leurs combinaisons.

Deux effets fondamentaux des impôts sont leurs effets sur le „revenu" et sur la „réadaptation des prix". L'effet sur le revenu est principalement le revenu en monnaie absorbé par l'impôt. Comme tel, il représente une perte de revenu en monnaie pour les possesseurs des moyens de production. Dans le cas des impôts qui ne sont pas d'application générale, l'effort de ces possédants pour éviter de subir la pleine charge monétaire provenant de l'impôt, fait que des moyens moindres sont mis en oeuvre dans l'industrie imposée et plus de moyens dans des industries non imposées et plus de moyens dans des industries non imposées ou moins imposées. Il se produit une répartition différente des ressources. Le prix du bien soumis à l'impôt est plus élevé; les prix des biens non ou moins imposés sont plus bas. Tel est l'effet d'„adaptation des prix". Comme les prix relatifs des produits finaux sont différents, certains acheteurs sont en situation meilleure, d'autres en pire. Tel est l'effet sur le „bien être des consommateurs".

Deux autres effets sont. „l'effet distributif" et „l'effet de stimulation". L'effet distributif est l'influence combinée des effets sur la répartition du revenu et la puissance économique. L'effet de stimu-

lation est l'influence des impôts sur la propension d'une population à travailler et à investir.

Il n'existe pas, pour les divers fiscalistes, une manière invariable de traiter de ces effets, dans leurs définitions respectives de l'incidence. Souvent, on attache peu d'attention explicitement à définir l'incidence en fonction de ces effets. Comme des auteurs différents parlent de combinaisons différentes de ces effets, cela donne lieu à confusion et à d'inutiles controverses.

L'analyse des effets en question demande que le processus de la translation de l'impôt soit étudié dans une optique d'équilibre général plutot que d'équilibre partiel de Marshall. Il est absolument nécessaire de tenir compte de l'influence des ressources qui abandonnent ou évitent une activité soumise à l'impôt, si l'on veut bâtir une théorie de la translation de l'impôt qui est compatible avec une théorie fiscale moderne. L'étude d'une théorie de la translation de l'impôt reposant sur les prémisses Marshalliennes ne réalise pas cet objectif. La principale conséquence de la détermination de ces différents effets est de conduire à une méthode différente pour analyser la translation de l'impôt.

On insiste, néanmoins, sur ce que le point de vue d'un équilibre général dans l'analyse de la translation de l'impôt, ne demande pas que l'on tienne compte de la manière dont les produits de l'impôt sont affectés. En effet, on démontre que la tentative de tenir compte de l'affectation de ces produits manque à la fois de réalisme et est source de confusions inutiles.

COUNTER-INFLATIONARY FISCAL, MONETARY AND DIRECT CONTROL MEASURES IN AN UNDER-DEVELOPED COUNTRY[1])

by SANTIKUMAR GHOSH

The purpose of this paper is to examine briefly in the context of an underdeveloped economy the relative efficacy of the different methods of price stabilization with respect to the time lag involved, administrative feasibility, and comparative efficiency. It has been suggested that a combination of fiscal, monetary and direct control measures would prove effective in holding inflationary pressures which may not be achieved by any single policy alone.

I. Some General Considerations

In a programme of price stabilization, there is, first, a place for overall regulation of economic activity through fiscal and monetary policy. Secondly, there are quantitative devices like export and import controls, licensing of industries or trades, price controls and allocations which influence and regulate economic activity in particular sectors or sub-sectors of an economy. There is, however, no single criterion (like the behaviour of some price index, for instance) that would make it possible to distinguish situations which call for general counter-measures to curb demand (or pressure from the cost side) as distinct from situations which call for other types of measures to deal with a rise in prices, either sectionally or generally. Rules for management of the size of the quantity of money, the amount of national debt, government expenditures and tax revenues in the interest of minimizing price instability are what may be sought.

One of the important tests of the effectiveness of any kind of price stabilization programme is the degree of administrative flexibility and the speed with which it can be adapted to changing circumstances. The time lag relevant to a programme of price stabilization

[1]) The author acknowledges his indebtedness to A. C. L. Day and Dr. Vera Anstey of the London School of Economics, under whose supervision the present study was conducted. All responsibility for the views expressed in the paper is his own.

can be subdivided into three components: (a) the lag between need for corrective action and recognition of this need, which may be called the recognition lag; (b) the time that elapses between the realisation of a need for action and the taking of counter-measures, which may be called the administrative lag; and (c) the lag between the taking of action and the effective impact of that action on the economic situation, which may be called the operational lag. The administrative lag is undoubtedly much shorter for monetary policy than for fiscal policy. All taxes will not or cannot be collected at source simultaneously with the associated payments, and transfer payments will not or cannot be made immediately without some kind of a waiting or processing period. Central bank action can be much more prompt, once the need is agreed on. Action can be taken very promptly to change the form or amount of the community's holdings of assets by open market purchase or sale of securities or by changes in rediscount rates or reserve requirements. A considerably longer time is required to change the net contribution of government to the income stream by changing the tax structure. Even though advance prescription for alternative possibilities eliminates any delay in deciding what changes to make in tax rates, exemptions, kinds of taxes levied, or the like, administrative considerations will enforce a substantial delay before the change becomes effective. The longest delay of all is likely to be involved in changing the net contribution of government to the income stream by changing government expenditure policy, particularly for goods and services. No matter how much advance planning may have been done, the rate of expenditure cannot be stepped up or curtailed overnight. However, the operational lag may be considerably shorter for fiscal policy than for monetary policy, at least in many situations. The great advantage of fiscal policy is that it has a direct and powerful impact on the income stream, whereas monetary policy bears at first on the asset structure and only through its effects on this structure does it indirectly and with some delay affect the income stream. Changes in government expenditure on goods and services lead to almost immediate changes in the employment of the resources used to produce those goods and services. Also, they have secondary effects through the changes thereby induced in the expenditures of the individuals owning the resources so employed [2]).

[2]) A Monetary and Fiscal Framework for Economic Stability, by M. Friedman, American Economic Review, 1948.

The cost in effort of enforcement of direct controls on the other hand is far greater than that of fiscal-monetary controls. New mechanisms must be created, or existing ones extended greatly for direct controls. Such controls are costly to administer because they must be applied separately to each type of goods and services, rather than merely to the generalised type of purchasing power which is money. They would have to be stricter than the need for the restrictions they impose because excess demand restrained at one point flows over or breaks through at innumerable other points. Moreover, controls are necessarily related to the price and wage structure in a base year. But in a changing economy, price and wage ceilings are continually revised, and every revision weakens the control system. The authorities are torn between continuing an obsolete price-wage structure and undermining the system. Further, controls involve economic costs in the form of rigidities, waste, and disrupted production. If long continued, they may weaken incentives to work and to supply goods in exchange for money.

II. *Limits of Fiscal Policy in an Underdeveloped Economy*

Limits of Taxation:

The limit of taxation is likely to be reached much earlier in a poor country where a unit of taxation affecting the bulk of the population imposes greater sacrifice than in a rich country, whilst when only a small proportion of the population is relatively well-off even penal direct taxation produces only a small part of the necessary governmental revenue, and at the same time may impose a serions disincentive. A basic explanation for the very low ratio of total taxation to national income in an underdeveloped economy is to be found in the meagre living standards of the people reflected in low per capita income levels. This sets a rigorous limit to taxation for most people in the community, if the existing frugal consumption levels are not to be lowered below the real or conventional subsistence level. Much also depends on the importance of monetary transactions in the economy. When a large part of production is carried on by the labour of peasant families and directly consumed by them, the scope for organising taxation would obviously be smaller than if the operations were conducted through markets and resulted in monetary transactions [3]). Owing to the small size of the

[3]) The greater part of the real income of the subsistence farmer, for instance, cannot be satisfactorily assessed.

corporate industrial and commercial sector, the tax structure is likely to reach its limit at much lower rates of tax in a less developed country. The low ratio of international trade to national income, which is characteristic of an economy like India, restricts the area of the large-scale commercial sector, from which it is easier to raise taxes. Further, illiteracy and the absence or inadequacy of modern business management and tax-payer book-keeping have handicapped the development of direct taxation. The tax administration of an underdeveloped country is often too inefficient and unreliable to practice the finer arts of taxation. As a result of a weak sense of responsibility amongst taxpayers and a less efficient tax administration, the extent of evasion is relatively greater in a less developed economy. The limited character of the information furnished by tax-payers, and the absence of any comprehensive reporting system on property transactions and property income make large-scale evasion through concealment or under-statement of profits and property income relatively easy. Also, there are political difficulties of applying fiscal policy (especially a cut in public expenditure plan) to regions with vast development hopes.

To the extent to which inflationary pressure is the result of external movements of prices and demand for the export products which dominate the domestic economy, the applicability of a generalised contractionary fiscal policy is correspondingly limited. It does not follow that a non-industrialised country has no fiscal weapon to use in defending the domestic economy against the vicissitudes of world market fluctuations. Such specific instruments as export taxes [4]) may lend themselves more readily to this kind of stabilization policy than more general measures like sales and income taxation.

Public Borrowing:

The use of the instrument of public debt management will be limited in scope because of the poor development of capital markets in an economically backward country. In an underdeveloped economy the national debt may amount to a small percentage of the national income. Since voluntary savings are at a low level the possibility of using public borrowing as a fiscal instrument is confined to narrow limits. Voluntary savings among the general mass

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[4]) Taxes and Fiscal Policy in Under-Developed Countries, U.N., 1954, p. 12.

of the population are rather small and not likely to increase significantly over a short period. The low income-level, the drive towards high consumption, social habits — last but not least — chronic inflation are causes of this state of affairs. Further, the sections of the population which depend on profits may, under inflationary conditions, tend to plough back their savings into business rather than subscribe to government loans.

III. *Tax Policy in Relation to Inflation*

Open and Repressed Inflation:

The size of a budget surplus required to remove the whole of excess demand under a repressed inflation is probably greater than that required under an open inflation because of the increasing unwillingness of the public to add to its stock of savings [5]). Under repressed inflation an indirect tax may not necessarily reduce consumer expenditure because of the presence of large savings already forced on the community by controls [6]). In as much as these savings are discounted under repressed inflation, the individual will not be too much concerned about paying higher prices because of the indirect taxes. The marginal utility of money to save may decrease so rapidly that higher prices have only a fraction of their former impact on the economy. The individual may as well spend his excess cash in paying higher prices for something he wants rather than save it.

In a partially controlled economy, the effect of increased taxation will first appear in the uncontrolled sector of the goods market, since there it is possible for the consumer to balance the marginal satisfaction of purchasing the free or uncontrolled item against the marginal satisfaction to be obtained from saving his money. The demand for controlled items, usually the more essential goods, will be reduced only after the marginal satisfaction gained from the purchase of a controlled item becomes equal to that of purchasing an uncontrolled item.

The Scope of Taxation:

In an underdeveloped economy, the tax system, if suitably ad-

[5]) The Economics of Repressed Inflation, by H. K. Charlesworth, London, 1956, p. 89.

[6]) This possibility is not so important under direct taxation, which reduces personal savings.

justed, can have a significant effect in slowing down the pace of inflation. There is quite some margin between present level of taxation and the 'dangerous' one in the less developed country [7]). The general way in which a tax system can operate to mitigate the effects of an inflationary spell is to reduce the quantum of national income available for private expenditure by a policy of surplus budgeting. The relation between tax collection and government expenditure affects private spending for goods and services through its impact on the quantity and value of monetary assets held by the community. A change in the quantity of money or debt brought about by a budget surplus has also its effect on the interest-rate structure and consequently the cost of borrowing and the value of existing debt.

The automatic capacity of a tax system to cope with inflationary situation may be increased through greater reliance on progressive direct taxes, the yield of which changes more than in proportion to changes in the tax base as a result of monetary and price variations. Increased use of *ad valorem* commodity taxes also helps in a similar way, owing to responsive movements in receipts with changes in prices. Administrative considerations may, however, indicate a preference for specific duties the receipts from which do not similarly respond to changes in economic conditions. The extent to which the automatic capacity of tax system to deal with inflation can be improved is therefore limited by other considerations [8]).

Taxes that fall directly on large additional incomes as well as commodity taxes that fall on the increase in general purchasing power resulting from inflation have a significant part to play in anti-inflationary policy. There is a place for special anti-inflationary taxes such as excess profits tax and commodity taxes on articles of both general and luxury consumption during periods in which the natural elasticity of the tax system and higher rates of taxes are together insufficient to check the pace of inflation.

An increase in or the imposition of taxes on personal income will, however, make producing for one's own consumption relatively

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[7]) The increasing bias towards social and developmental services in public expenditure helps to raise the limit of taxable capacity. In general, however, the taxable capacity will be delimited by the desire to avoid undesirable social effects and by the administrative limits of efficient methods of tax collection.

[8]) Report of the Taxation Enquiry Commission, 1953-54, volume 1, Delhi, 1955, p. 150.

more attractive as compared with selling one's services to some one else. In this way, the supply of goods and services entering into the market might be reduced by higher income taxation [9]). The shift to subsistence production will be reduced to the extent to which the tax-payer has a strong preference for, say, imported merchandise, and to the extent to which his skills are specific to activities in the market sector.

IV. Implications of Monetary Control for an Underdeveloped Country

In an industrially underdeveloped country, newly-created money is almost completely absorbed by the transaction sphere. From a macroeconomic point of view, idle balances are not significant, nor are they likely to come into being as a result of an increase in the supply of money. Effective demand is likely to increase *pari passu* with the increase in the volume of money. Under such conditions, monetary policy is supposed to come into its own.

In the regulation of the financial system of a less developed country special difficulties are, however, encountered on account of the large volume of funds held outside the banking system, the absence of a fixed ratio between commercial banks' cash and balance with the central bank, on the one hand, and their deposits on the other, and the lack of integration between indigenous bankers and the organised banking system. The narrowness of the security market, small number of domestic investors, and the maintenance by commercial banks of an elastic cash ratio stand in the way of the success of open market operations. The lack of suitable bills for discount and the habit of banks to keep comparatively large cash reserves have also prevented in many countries the wide use of rediscount facilities offered by central bank.

Nevertheless, there is nothing inherent in the organization of underdeveloped financial systems to prevent the growth of central bank control over the availability and terms of credit. Central banks may be able to influence market rates by changes in bank rate because of their economic, and at times their legal, position in the financial system, with wide powers for selective credit control,

[9]) This is not typical of income tax alone. If a commodity tax or a general sales tax is expected to be permanent, it will have essentially the same effects as a personal income tax upon the distribution of an individual's resources between those used for sale in market and those used for production for himself.

open market operations, and moral pressures. In India, for instance, the Reserve Bank of India raised its bank rate from 3% to 3½% on November, 1951 and the lending rates of commercial banks increased by ½ %, in spite of the fact that market rates had already risen significantly during the second half of 1950 and early 1951.

While traditional methods of monetary and credit control are not as ineffective as might be expected in an underdeveloped economy, the new techniques available to central banks seem to be more appropriate to its monetary environment. When there is virtually no open market in which to operate, if the cash reserve ratios are raised by decree of the central bank (or other authority) the tightening effect on the commercial banks will be exactly the same as a given amount of open market sales by the central bank. The method of variable reserve ratios has the merit of keeping the security market undisturbed, a not unimportant factor in countries where fluctuations in security prices may make investors nervous about the stability and liquidity of the market. However, reliance on a particular weapon alone would not be enough in these countries but should be reinforced by other measures of monetary and fiscal control.

V. *The Scope for Direct Controls*

Fiscal (or monetary) policy alone is too blunt and slow an instrument to prevent inflation or counteract its consequences; it may have to be supplemented by an effective programme of direct controls. In periods of inflationary pressure, the economy may suffer from bottlenecks in, for instance, steel and transportation, and from serious shortages of certain raw materials and food. Policies directed at the overall aggregate demand, including monetary and fiscal policy, could not possibly cope with the problem of relative price distortion. Specific and direct measures may be necessary.

Difficulties of Administering Direct Controls:

Direct controls have their limitations especially in an economy where millions of farmers, artisans and small entrepreneurs have to be controlled. The nature of the economy is such that an efficient system of physical controls can not easily be instituted. Production is carried on by millions of petty agriculturists or small producers who turn out a wide variety of articles which can not easily be

standardised. Effectiveness of controls under these conditions can be ensured only through control at strategic points and through fostering producers' and consumers' organisations which will help to make the actual operation of controls smoother, less irksome and more efficient.

Control Over Investment:

A developing economy usually experiences shortages not only in investible funds for needed types of investment in general but also in scarce materials, skilled manpower, foreign exchange and sometimes food supply. The usual instruments of direct control over strategic resources and the flow of strategic goods are licences, quotas, and authorization, all of which may involve the grant of priorities. Private investible funds flowing through corporate organizations may be controlled at the stage of the issuance of capital stock and other securities. In order to prevent investment in luxury and less essential buildings, especially in the residential field, a developing country can control investment in building construction through licences and authorization, which may be granted on a priority basis. Controls, both in volume and in direction, over fields of investment in which imported equipment or material is required can be exercised in the form of import duties, import quotas, and rationing of foreign exchange.

In case of particular stringency, the use of indigenous scarce materials may be regulated by means of quantitative inventory or anti-hoarding controls limiting the quantities of material to be held in inventory by essential and non-essential industries.

Control Over Consumption:

In countries with an efficient administration, or a fair concentration in the sources of supply of consumption goods, price control and rationing can be effectively applied to check the increase in consumption arising from an increase in income. In countries where food is produced in numerous small farms, and consumed largely in rural areas, effective price control and rationing of food is relatively difficult.

Even the most extensive system of price control is applied mainly to important working-class cost-of-living commodities. When shortages of such goods arise at the controlled prices, temporary saving or excess liquidity is less likely than the purchase of un-

controlled goods, even when the prices of these uncontrolled goods have risen substantially. In some cases, the uncontrolled goods may be semi-luxuries and luxuries including jewellery and ornaments. Services, particularly motion-pictures, in many countries, also receive funds which would probably have been spent on basic food and clothing in the absence of controls. This points to the need for overall regulation of purchasing power through fiscal and monetary policy.

VI. *Import - Export, and Exchange Controls*

(1) *Import Control:*

In general, there are two main features of import control in a less developed country: (a) prohibition, i.e. the import of certain listed commodities is prohibited as non-essential; and (b) licensing, the import licence being either general or individual. In applying the principles of licensing, ons or more of the following criteria are employed: (I) currency of origin, (II) degree of essentiality, (III) quotas and monetary ceilings for individual imports, (IV) special commitments or obligations, and (V) international allocations. Generally speaking, essentiality is affected by the urgency of the import requirement, and the currency in which it has to be paid.

The restriction of non-essential consumption imports tends to raise local prices of such goods and therefore stimulate their domestic production. A diversion of resources may have an inflationary effect which government may counteract by levying an internal tax on such non-essential and luxury goods, whether they are imported or produced domestically.

A method which governments have often used to combat inflationary pressure is a temporary relaxation of import controls or the temporary suspension of import duties on some crucial consumer goods when prices threaten to get out of control.

(2) *Export Control:*

The important objectives of export control in a less developed country [10]) are: (I) obtaining larger proceeds of foreign exchange

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[10]) Trade and Exchange Controls in the ECAFE Region, U.N. Economic Commission for Asia and the Far East, Research and Statistics Series, Trade and Finance Paper No. 1, New York, September 1949.

from exports, (II) conserving adequate supplies for home consumption, (III) increasing exports to hard currency countries, (IV) enforcing standards of quality and grading, (V) fulfilling export commitments in trade agreements, and (VI) fulfilling commitments under international allocations.

(3) *Exchange Control:*

A low level of international reserves coupled with a large decrease in export earnings on account of a decline in foreign demand and/or a large increase in demand for imports, may lead an underdeveloped country to impose direct control on her payments to other countries. Government or monetary authorities may prescribe more than one exchange rate for different types of international transaction and thus introduce a multiple exchange-rate system. The system of multiple exchange rates may be the most readily workable type of exchange regulation in a country which is lacking in effective administrative organisation and staff necessary for quantitative control. Although either quantitative restrictions or multiple exchange rates can be utilised to keep the cost of essentials low, the latter are a more effective anti-inflationary device. Because price restrictions in the form of multiple exchange rates provide revenue for government, they exert an additional disinflationary influence by tapping some consumer purchasing power.

The fact that most underdeveloped countries are dependent on imports for virtually all their capital equipment, and for most luxury consumers' products, indicates that rational interference with the free working of the foreign exchange market can prove to be a useful way of influencing the size and direction of consumption and investment.

VII. *Concluding Remarks*

Although direct controls can not completely replace the need for fiscal and monetary measures, they can supplement them in any programme of price stabilization. Unless fiscal, monetary and direct control measures are properly co-ordinated with the same objective of countering inflation, the success of a single stabilization policy alone would necessarily be limited. Direct controls, if unaccompanied by any restriction on the amount of purchasing power, may not be as effective as an anti-inflationary policy. Similarly, the effectiveness of central bank action would depend very largely

upon the kind of fiscal policy pursued by government. Sound budget policy is necessary to make monetary measures effective. Unless monetary contraction is accompanied by a budgetary surplus, monetary action is not likely to exert the required leverage toward stability. A persistent budget deficit, for instance, would provide a gap through which far more money might come into being than could be restrained by acting on credit for business.

MESURES FISCALES, MONETAIRES ET DE CONTROLE DIRECT, A CARACTERE ANTI-INFLATOIRE, DANS UN PAYS SOUS-DEVELOPPE.

par S. GHOSH

RÉSUMÉ

L'objet de l'article est d'étudier dans le cadre d'une économie sous-développée, l'efficacité relative des différentes méthodes de stabilisation des prix, eu égard aux délais qu'implique leur mise en oeuvre.

L'Auteur conclut que dans un programme de stabilisation, les contrôles directs peuvent utilement compléter les mesures d'ordre fiscal et monétaire. Le succès d'une politique anti-inflatoire dépend, de la coordination appropriée de l'ensemble des instruments de la politique économique. Des contrôles directs non accompagnés de mesures de réduction du pouvoir d'achat sont moins efficaces qu'une politique anti-inflatoire cohérente. De même, le succès de l'action de le Banque centrale dépend en grande partie de la nature de la politique fiscale poursuivie par le gouvernement. Sans politique budgétaire saine, les mesures dans le domaine monétaire risquent de rester inefficaces. C'est ainsi que la contraction de la circulation monétaire doit aller de pair avec un surplus budgétaire, si l'on désire retirer un bénéfice réel d'une pareille politique. De même un déficit budgétaire persistant neutraliserait fatalement ls avantages qun l'on escompterait retirer d'une réduction des crédits bancaires aux entreprises.

THE SHIFTING, INCIDENCE, AND EFFECTS OF THE CORPORATE NET INCOME TAX IN A MACROECONOMIC SETTING

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In view of the important role which the corporate net income tax plays in the revenue system of the United States, the economic effects of the tax are of crucial significance to the continued growth and stability of the economy. The tax unquestionably exerts a direct influence on the short-run as well as the long-run price, production, and investment policies of individual corporate enterprises. The cumulative effects of the tax are directly relevant to the determination of the over-all level of national income and employment.

It is generally recognized that the employment effects of the corporate net income tax will be conditioned by the shifting and incidence of the tax. In the area of methodology, however, students of taxation have failed to develop a fully integrated approach to the analysis of the actual and/or potential economic effects of the tax. The need for an analytical integration of the "burden", i.e., the incidence, and the employment effects of the taxation process becomes necessary if the tax is shifted in the short-run, even in part. The main purpose of this paper is to develop a framework of analysis within which it is possible to integrate the microeconomic question of corporate net income tax incidence in to the analysis of the aggregative employment effects of the tax.

I. The Hubbard-Goode Contributions

Keynes' *General Theory* directed the attention of economists to the role of government finance in relation to the maintenance of a high level of employment. By far the greatest portion of the subsequent discussion, however, has centered around the expenditure and borrowing phases of public finance. Only incidental reference

[1]) The author is indebted to Professor Elmer D. Fagan, Stanford University, for numerous helpful suggestions on this paper.

has been made to the "employment" effects of one or another program of taxation. This latter gap in the theory of the employment effects of government finance has been considerably narrowed as a result of the recent contributions of Professors Joshua C. Hubbard [2]) and Richard Goode [3]).

Professor Hubbard constructed a framework of analysis within which both the tax extraction and expenditure processes could be studied in terms of their effect upon the consumption and investment variables which condition the level of national income and employment. He entered a long-ignored, relatively unknown, yet significant area of public finance, and gave a new perspective to the role of taxation in its relation to an over-all fiscal policy.

Professor Goode, in his significant study of the corporate net income tax, rejected the traditional partial equilibrium approach as a framework within which to analyze the effects of a general tax on the variables which condition the level of output, income, and employment. He recognized the necessity of bridging the analytical gap between the narrower problem of tax incidence and the broader related problem of the cumulative output effects of taxation.

The analyses of Hubbard and Goode provide a basic framework within which to study the macroeconomic effects of the corporate net income tax. Both approaches give due recognition to the effects of the revenue extraction and expenditure processes on investment and the propensity to consume which, in turn, ultimately determine the level of national income and employment. Hubbard, in particular, made explicit the relative income-creation potential of alternative taxation and expenditure policies. Of greatest importance, however, is the fact that both Goode and Hubbard linked the question of tax shifting and incidence to the analysis of the employment effects of governmental taxing and spending programs.

Although Goode and Hubbard developed the necessary link between the incidence and the employment effects of the corporate income tax, they both assumed that the tax would not be shifted in the short-run. This limited the significance of their final conclusions. Upon the basis of their assumption that the corporate net income

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[2]) Hubbard, *Creation of Income by Taxation* (Cambridge, Mass.: Harvard University Press, 1950).

[3]) Goode, *The Corporation Income Tax* (New York: John Wiley & Sons, Inc., 1951).

tax could not be shifted in the short-run, both Goode and Hubbard tended to exaggerate the direct repressive effects of the tax on private investment. The short-run employment effects would be conditioned accordingly within their framework of analysis [4]).

To the extent that the corporate net income tax can be shifted to consumers or employed resources in the short-run, the final burden of the tax will directly influence not corporate investment, but the propensity to consume. The effect on investment in this case will be indirect and will be conditioned by the acceleration principle. The final short-run income and employment effects of corporate net income taxation may vary both quantitatively and qualitatively depending upon the degree to which corporate investment and the propensity to consume are ultimately affected by the *incidence* of the tax. Since there is strong reason to believe that the corporate net income tax is shifted, at least in part in the short-run, an appropriate macroeconomic model for the analysis of the incidence and effects of the tax should incorporate this assumption [5]).

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[4]) Goode, it should be noted, gave recognition to the decline in consumption spending on the part of corporate shareholders who might bear part of the tax burden. He also concluded that the corporate net income tax must continue to occupy an important place in the revenue structure of the United States. *Ibid.*, p. 142.

[5]) In an economic setting where corporate management exercise discretionary control over price policy, and where a high tax rate structure exists, it becomes increasingly difficult to deny the possibility of tax shifting in the short-run. In those instances where the businessman thinks of the corporate net income tax as a type of cost related to the pricing process, it is highly probable that the tax will be shifted, at least in part, in the short-run. This will be especially true in those areas of industry and commerce where markup-over-cost pricing methods are used. Empirical support for the position that the corporate net income tax is shiftable, at least in part in the short-run, can be gained from a review of the manner in which the tax is treated in the budgetary procedures and financial statements of many business enterprises.

It is important to realize that there is no simple yes or no answer to the question of the short-run and long-run incidence of the corporate net income tax. The shiftability of the tax depends upon a multitude of forces which are constantly changing over time. The assumption concerning incidence must be adjusted accordingly since the final effects on national income and employment will be conditioned by the changing incidence of the tax. Thus, in the application of the model to the solution of a particular policy question, the underlying assumptions with respect to the shifting and incidence of the corporate net income tax should be governed by the alternative forces which are operative within the economic setting which the model aims to describe.

II. *Clarification of Concepts*

The clarity of any theoretical model depends in large part upon a clear definition and a consistent application of the tools of analysis, or common language of expression, which develop along with the body of theory itself. Professor E. R. A. Seligman pioneered the development of the basic nomenclature of tax shifting and incidence analysis [6]). In recent and contemporary analysis of the shifting, incidence, and effects of taxation, however, it has been commonplace to redefine the basic concepts along lines of one's own choosing. There has been no concerted effort to maintain a generally acceptable group of concepts for analytical purposes.

Another important aspect of the existing terminological deficiency in taxation analysis is the past failure to delineate clearly the conceptual line between the *incidence* and the *effects* of taxation. Traditionally, effects have been referred to as "those influences subsequent to incidence" [7]), or "the ultimate conditions to which a tax gives rise" [8]), or "the other consequences of taxation" [9]). Certain writers have felt it unnecessary, or impossible, to distinguish between the two terms [10]). The problem of distinguishing between, or concisely identifying the nature of the two concepts, remains one of the main trouble spots of the nomenclature area.

In the opinion of the present writer, the *incidence*, or the money and real income loss produced by the tax as such, is merely one type of *economic effect* which follows from one or another tax program. For general analytical purposes it is useful to examine both the *extraction* and the *expenditure* effects of taxation. For purposes of the discussion which follows, the *extraction* effects will describe the ag ·egative effects, including the pressure, the capitalization, the amortization, the transformation, and the shifting and incidence effects which follow when corporate income taxes are imposed on the business sector of the private economy. The *expenditure* effects

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[6]) Seligman, *The Shifting and Incidence of Taxation* (5th ed. Revised; New York: Columbia University Press, 1926), Ch. I.

[7]) *Ibid.*, p. 14.

[8]) H. A. Silverman, *Taxation Its Incidence and Effects* (London: Macmillan and Co., Ltd., 1931), p. 89.

[9]) Harry Gunnison Brown, *The Economics of Taxation* (New York: Henry Holt and Company, 1924), p. 11.

[10]) Duncan Black, *The Incidence of Income Taxes* (London: Macmillan and Co., Ltd., 1939), pp 123-124.

will describe the influence of the government expenditure of the corporate net income tax revenue on the economic variables which determine national income and employment. The combined effects of the extraction and expenditure processes upon investment and the propensity to consume will be referred to as the *fiscal policy* effects of "taxation".

III. *Outline of the Macroeconomic Model*

The broad outline of a macroeconomic model for the analysis of the *fiscal policy* effects of the corporate net income tax can be developed in a series of related propositions. The propositions are the following:

1. The *fiscal policy* effects of corporate net income taxation depend on the *extraction* and *expenditure* effects of the tax.

2. The *extraction* effects of the corporate net income tax depend upon the extent to which the burdens produced by the tax influence investment and the propensity to consume.

3. The net effect of the tax extraction process on investment and on the propensity to consume is conditioned by the *transformation*, the *shifting* and *incidence*, and the *pressure* of the corporate net income tax.

4. On balance, an income-destruction effect normally follows from the extraction of corporate net income tax revenues from the private sector.

5. The induced decline in national income resulting from the tax extraction process depends upon the *negative leverage coefficient*, i.e., the combined influence of the negative multiplier (K^-) and deceleration (A^-) principles.

6. The *expenditure* effects of corporate net income taxation depend primarily upon (a) the nature and purpose of the expenditure program, (b) the phase of the business cycle, and (c) the induced effects of government spending on investment and the propensity to consume.

7. Government spending of the revenues from corporate net income taxation will produce an income-creation effect.

8. The resulting increase in national income and employment will depend on the *positive leverage coefficient*, i.e., the positive multiplier (K^+) and acceleration (A^+) principles.

9. The net *fiscal policy* effects of corporate net income taxation

will depend upon the values of the positive and negative leverage coefficients.

IV. *An Application of the Macroeconomic Model to the Analysis of the FISCAL POLICY Effects of Corporate Net Income Taxation Under Selected Assumptions*

Within the framework of the macroeconomic model outlined in the preceding section, the *fiscal policy* effects of corporate net income taxation depend on the *extraction* and *expenditure* effects produced by the tax. The *extraction* effects are dependent on (1) the *primary* effect of tax incidence on private investment and income, (2) the *induced* effects of the change in private income on consumption, and (3) the *induced* effects of the final change in output resulting from (1) and (2) on private investment. The expenditure effects of the corporate net income tax are dependent on (1) the *primary* income effects of governmental expenditure of the tax proceeds, (2) the *induced* effects of (1) on private consumption, and *(3)* the *induced* effects of (1) and (2) on private investment. Clearly, the negative and positive leverage coefficients determine the *induced* effects of the tax extraction and spending processes on private investment and on the propensity to consume.

The problem of quantifying the *fiscal policy* effects of corporate net income taxation requires a determination of five basic numerical values, *viz.:* (1) It is necessary to determine the extent to which the *impact* of the tax reduces private investment [11]). (2) To the extent

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[11]) The investment effect will be conditioned in large part by the extent to which the imposition of the tax, or higher tax rates, cause a shift to the left in the marginal efficiency of capital schedule. The elasticity of the investment demand schedule will also be a conditioning factor if the imposition of the tax raises the supply price of investment. The financial drain associated with the payment of the tax may also have the effect of reducing the level of private investment spending. In the more technical sense, the tax disinvestment coefficient will condition the extent to which private investment will be curtailed in direct response to the tax burden as such. The relationship is expressed as follows:

ΔI^N induced) is some function, X, of $(T^N - T^{N-1})$, or:

ΔI^N induced) $= X\ (T^N - T^{N-1})$, where:

ΔI^N = the *primary* ex ante disinvestment induced by the increase in corporate income tax rates in period N.

X = tax disinvestment coefficient.

T^N = amount of corporate tax burden in period N.

T^{N-1} = amount of the tax burden in N—1.

that the tax is shifted, it is necessary to determine the effect of the tax burden on the propensity to consume. The related "compensating" effect on corporate investment must also be taken into consideration. (3) It is necessary to establish values for the negative tax extraction multiplier (K^-) and the deceleration (A^-) coefficients. These, in turn, determine the negative leverage coefficient of the tax extraction process. (4) On the expenditure side, it is necessary to establish what portion of the tax revenue is channelled back into the income stream in the form of income-generating spending on goods and services. (5) It is necessary to establish values for the positive tax expenditure multiplier (K^+) and acceleration (A^+) coefficients which, in turn, determine the positive leverage coefficient. Once values are assigned to the variables enumerated, the *fiscal policy* effects of the corporate net income tax become definitive. For any given combination of these variables the tax will prove to be neutral, negative, or positive as far as its effect on national income and employment is concerned.

In the following paragraphs, three types of cases are presented to illustrate the *fiscal policy* effects of the corporate net income tax. Case I presents the "neutral" case — the incidence of the tax falls upon corporate investment, but government spending offsets the *extraction* effects; Case II presents a "negative" case in which a net income destruction effect is produced; Cases III (A), III (B), III (C), and III (D) illustrate conditions under which the corporate income tax is "positive", or income creating.

Case I — The Neutral Case:

The net *fiscal policy* effects of taxation will be neutral with respect to the destruction or creation of income in the case where, (1) private investment and/or consumption spending are reduced in an amount equal to the tax; (2) government spending on goods and services is equal to the amount of the tax; (3) the value of the MPC on the extraction and expenditure side is equal; and (4) the values of A^- and A^+ are equal.

In Case I the following assumptions govern the analysis: (1) The economic system before the imposition of a new corporate net income tax rests at a full employment equilibrium. (2) Decreases in investment caused by the extraction of the tax revenue are not offset by the use of either past savings or credit. (3) The *incidence* of the tax falls on corporate investment, i.e., the tax disinvestment

coefficient (X) is equal to one. (4) The negative tax extraction multiplier (K^-) is 5, based on an MPC of .8, or 80%. Individuals experience a direct decline in income as a result of the incidence of the tax and the induced reduction in income. They are assumed to reduce consumption spending by $ 0.80 for every dollar of income reduction generated by the tax extraction process. (5) The positive tax expenditure multiplier (K^+) is 5, based on an MPC of .8, or 80%. (6) The tax deceleration and acceleration coefficients, A^- and A^+ respectively, are assumed to be zero. (7) The government channels the full amount of the tax proceeds back into the income stream by the purchase of goods or services [12]).

Under the preceding assumptions, the sequence of events would be as follows: (See Schema 1.)

1. The impact and incidence of the tax would reduce ex ante private investment, and thus private income, by $ 10.

2. The reduction in income associated with the incidence of the tax induces a reduction in consumption. The operation of the negative tax extraction multiplier ultimately produces a $ 50.00 decline in output and income.

3. The expenditure of the tax revenue would create $ 50.00 of income through the working of the positive tax expenditure multiplier. The net *fiscal policy* effect is neutral; that is, the income destruction effects of the tax extraction process are exactly offset by the expenditure of the tax proceeds on goods and services.

In the absence of other disturbing influences, e.g., bank credit or liquid savings, this case depicts an optimum full employment taxing-spending policy. The extraction of the tax revenue from the private sector reduces real investment, and thereby releases economic resources to the public sector. With this ideal taxing-spending combination, the private business sector does not bid directly against government in the market place; inflationary pressures are thereby

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12) Trygve Haavelmo has demonstrated the "pure" multiplier effects which might be generated by public spending balanced by a proportional income tax under the following assumptions: (1) The marginal propensity to consume of taxpayers and revenue recipients is equal; (2) Total private investment remains constant; (3) The tax money is fully spent by government. Under Haavelmo's assumptions a "balanced budget" has a direct multiplier effect equal to one in *addition* to whatever positive or negative effects might follow from the redistribution of income. See Haavelmo, "Multiplier Effects of a Balanced Budget", *Econometrica,* XII (October, 1945), 311-318.

Schema 1. Case I.

THE *FISCAL POLICY* EFFECTS OF THE CORPORATE NET INCOME TAX IN THE "NEUTRAL" CASE.

TAX EXTRACTION EFFECTS				TAX EXPENDITURE EFFECTS			
	$X = 1$; MPC $= .8$; $K^- = 5$; $A^- = 0$.				$X = 1$; MPC $= .8$; $K^+ = 5$; $A^+ = 0$.		
	ΔI +	ΔC =	ΔY	ΔG +	ΔI +	ΔC =	ΔY
INCIDENCE	−$ 10.00 —— Leads to →		−$ 10.00	+$ 10.00 —— Leads to		←	+$ 10.00
		−$ 8.00 →	−$ 8.00			+$ 8.00 →	8.00
		− 6.40 →	− 6.40			+ 6.40 →	+ 6.40
	−$ 10.00	−$ 40.00	−$ 50.00		0	+$ 40.00	+$ 50.00
					−$ 10.00	−$ 40.00	−$ 50.00
	NET FISCAL POLICY EFFECTS →			+$ 10.00	−$ 10.00	0	0

mitigated. A consumption tax falling on individuals with a marginal propensity to consume of one would produce a similar result [13]).

Case II — The Negative or Income Destruction Case:

The extraction and expenditure of the corporate net income tax will be most income destructive when (1) private investment and/or consumption are reduced in an amount in excess of the tax; (2) the value of the MPC on the extraction side is greater than the value of the MPC on the expenditure side; (3) government spending on goods and services is less than the tax; (4) the value of A^- is greater than the value of A^+.

Case II illustrates the situation in which the imposition of the corporate net income tax induces disinvestment and income destruction. The case is based on the following selected assumptions: (1) A new tax of $ 10.00 is imposed; (2) the incidence of the tax falls on corporate investment, i.e., it is not shifted; (3) the tax disinvestment coefficient (X) equals one; (4) the reduction in investment is not offset by savings or credit; (5) $K^- = 5$; (6) $K^+ = 5$; (7) $A^- = 0.3$; (8) $A^+ = 0$.

Given these asumptions, the following *fiscal policy* effects would be produced: (See Schema 2.)

1. The impact and incidence of the tax reduces private investment, and thus private income, by $ 10.

2. The operation of the negative tax extraction multiplier ultimately produces a $ 50.00 decline in income.

3. The tax extraction decelerator of 0.3 induces disinvestment of $ 15.00. ($A^- = \frac{\text{Induced disinvestment}}{\text{Change in income/output}} = 0.3 = \frac{\$\ 15.00}{\$\ 50.00}$.)

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13) The realization of economic stability at full employment via the neutral taxing-spending program is difficult to attain in an economic setting where credit policy undermines a stability-oriented tax program, where a high degree of liquidity exists, and where freedom of individual choice as between current spending and saving is present. These factors will often operate to counterbalance a neutral fiscal policy. In other words, taxing and spending policy at full employment must be more than neutral; it must exert a negative pressure on national income if inflationary pressures are to be contained. The influence of the credit, liquidity, and freedom-of-choice factors can be integrated into the analysis of the *fiscal policy* effects of "taxation" via the macroeconomic model approach outlined in the preceding section.

Schema 2. Case II.

THE *FISCAL POLICY* EFFECTS OF THE CORPORATE NET INCOME TAX IN THE "NEGATIVE" CASE.

	TAX EXTRACTION EFFECTS				TAX EXPENDITURE EFFECTS			
	$X = 1$; MPC $= .8$; $K^- = 5$; $A^- = 0.3$.				$X = 1$; MPC $= .8$; $K^+ = 5$; $A^+ = 0$.			
	ΔI	+ ΔC	=	ΔY	ΔG	+ ΔI	+ ΔC	= ΔY
INCIDENCE	−$ 10.00	Leads to →		−$ 10.00	+$ 10.00	Leads to →		+$ 10.00
		−$ 8.00 →		− 8.00			+$ 8.00 →	+ 8.00
		− 6.40 →		− 6.40			+ 6.40 →	+ 6.40
		I		I			I	I
	−$ 10.00	−$ 40.00		−$ 50.00	+$ 10.00	0	+$ 40.00	+$ 50.00
		$A^- = 0.3$						
	−$ 15.00	→		−$ 15.00				
	−$ 25.00	+ −$ 40.00	=	−$ 65.00		−$ 25.00	−$ 40.00	−$ 65.00
NET FISCAL POLICY EFFECTS →					+$ 10.00	−$ 25.00	0	−$ 15.00

4. A total of $ 65.00 of private income is destroyed by the tax extraction process.

5. The expenditure of the tax revenue creates $ 50.00 of income through the operation of the positive tax expenditure multiplier. The net *fiscal policy* effect of the tax is negative under these conditions.

At this point, four variations of the "positive" case are presented. Case III (A) presents the case of complete tax shifting with induced disinvestment; Case III (B) presents the condition of non-shifting — the full amount of the tax is assumed to fall on corporate investment; Case III (C) presents the case of complete shifting where the tax falls on consumption; Case III (D) presents the case of partial tax shifting in which the burden of the tax falls partly on investment spending and partly on consumption. These four cases are developed in order to demonstrate the relationship between the shifting and incidence and the macroeconomic effects of taxation, and to illustrate under what conditions the corporate net income tax might be income creating.

Case III (A) — The Income Creation Case of Complete Tax Shifting with Induced Disinvestment:

In this case, the following selected assumptions govern: (1) The economic system before the imposition of a new corporate net income tax rests at an underemployment equilibrium. (2) The tax is shifted in full to consumption. (3) A time lag between the impact and the shifting of the tax is assumed to exist; the immediate effect of the tax is to reduce investment spending by the amount of the tax. (4) Decreases in consumption caused by the tax shifting process are not offset by the use of either past savings or credit. (5) $K^- = 3\text{-}^1/_3$, based on an MPC of .7, or 70%. (6) $A^- = 0.3$. (7) The government spends the full tax proceeds on goods and services. (8) (8) $K^+ = 5$, based on an MPC of .8, or 80%. (9) $A^+ = 0$.

With the imposition of a $ 10 corporate net income tax the sequence of events would be the following: (See Schema 3.)

1. The *impact* of the tax produces a $ 10 reduction in private investment and private income.

2. The initial decline in private income brings into operation the negative tax extraction multiplier.

3. The corporate net income tax is shifted in full to consumers

who reduce their *real* consumption by $ 10. This restores the level of investment to its pre-tax level.

4. The working of the negative tax extraction multiplier produces a $ 33.33 decline in total national income.

5. The tax extraction decelerator of 0.3 induces disinvestment of $ 10.00. ($A^- = \frac{\text{Induced disinvestment}}{\text{Change in income/output}} = 0.3 = \frac{\$\ 10.00}{\$\ 33.33}$.)

6. A total of $ 43.33 of private income is destroyed by the tax extraction process.

7. The operation of the tax expenditure multiplier produces an increase in income of $ 50.00. Under the governing assumptions, the corporate income tax is income-creating to the extent of $ 6.67.

The following assumptions apply to Cases III (B), III (C), and III (D): (1) The decreases in investment and/or consumption caused by the extraction of tax revenue are not offset by the use of either past savings or credit. (2) The economic system before the imposition of the corporate net income tax rests at an underemployment equilibrium. (3) The negative tax extraction multiplier is 3-1/3, based on an MPC of .7, or 70%. (4) The positive tax expenditure multiplier is 5, based on an MPC of .8, or 80%. (5) The tax deceleration and acceleration coefficients, A^- and A^+ respectively, are assumed to be zero. (6) A time lag between the impact and shifting of the tax is assumed to exit such that the immediate effect of the tax is to reduce investment spending by the amount of the tax. (7) The government channels the full amount of the tax proceeds back into the income stream by the purchase of goods or services.

Case III (B) — The Income-Creation Case of Non-Shifting:

In this case, let it be assumed that a new corporate net income tax of $ 10 is imposed. Under the preceding assumptions, the sequence of events would be as follows: (See Schema 4.)

1. The *impact* of the tax would reduce private investment, and thus private income, by $ 10.

2. The initial reduction in income associated with the impact of the tax induces a reduction in consumption. The operation of the negative tax extraction multiplier ultimately produces a $ 33.33 decline in output and income.

3. The expenditure of the tax revenue would create $ 50.00 of income through the working of the positive tax expenditure multi-

Schema 3. Case III (A).

THE *FICAL POLICY* EFFECTS OF THE CORPORATE NET INCOME TAX IN THE CASE OF COMPLETE SHIFTING, WITH INDUCED DISINVESTMENT.

TAX EXTRACTION EFFECTS			TAX EXPENDITURE EFFECTS			
$X = 1$; MPC $= .7$; $K^- = 3\text{-}1/3$; $A^- = 0.3$			$X = 1$; MPC $= .8$; $K^+ = 5$; $A^+ = 0.$			
ΔI	ΔC	ΔY	ΔG	ΔI	ΔC	ΔY
IMPACT → — $ 10.00	Leads to shifting →	— $ 10.00	+ $ 10.00	Leads to →		+ $ 10.00
+ $ 10.00 ←	— $ 10.00				+ $ 8.00 →	+ 8.00
	— 7.00 →	— 7.00				
	— 4.90 →	— 4.90			+ 6.40 →	+ 6.40
	— 3.43 →	— 3.43			+ 5.12 →	+ 5.12
0	— $ 33.33	— $ 33.33	+ $ 10.00	0	+ $ 40.00	+ $ 50.00
	$A^- = 0.3$					
— $ 10.00	→	— $ 10.00		— $ 10.00	— $ 33.33	— $ 43.33
— $ 10.00	— $ 33.33	— $ 43.33				
NET FISCAL POLICY EFFECTS →			+ $ 10.00	— $ 10.00	— $ 6.67	+ $ 6.67

plier. The *fiscal policy* effect of the corporate net income tax in the case of non-shifting is to create $ 16.67 of income in the private sector.

Case III (C) — The Income-Creation Case of Complete Tax Shifting:

With the imposition of a $ 10 corporate net income tax the sequence of events would be the following: (See Schema 5.)

1. The impact of the tax produces a $ 10 reduction in private investment and private income.

2. The initial decline in private income brings into operation the negative tax extraction multiplier.

3. The corporate net income tax is shifted in full to consumers who reduce their *real* consumption by $ 10. This restores the level of investment to its pre-tax level.

4. The working of the negative tax extraction multiplier produces a $ 33.33 decline in total national income.

5. The expenditure of the tax revenue is income creating to the extent of $ 50.00. The *fiscal policy* effects of the corporate net income tax, even in the case where the tax is shifted in full to consumption, is income creating.

A comparison of the final results of Cases III (B) and III (C) reveals the *qualitative* real income distributional changes produced by the tax shifting process. In Case III (B), where no tax shifting occurs, the net increase in consumption is $ 16.67; private investment is reduced by $ 10.00 — the amount of the tax. In Case III (C), on the other hand, the final net increase in consumption is $ 6.67. No change in investment is produced since the burden of the tax has been shifted from investment to consumption. It is clear, therefore, that the question of tax incidence is primarily related to the redistribution of real income produced by the impact and/or the shifting of the tax burden. This is not to deny, however, that additional economic effects will follow from the incidence of a given tax.

Case III (D) — The Income-Creation Case of Partial Shifting:

1. The *initial* effects of imposing a $ 10 corporate net income tax would be identical to Case III (C). Private investment and income decline by the amount of the tax, and the negative tax extraction multiplier would be brought into operation. (See Schema 6.)

Schema 4. Case III (B).

THE *FICAL POLICY* EFFECTS OF THE CORPORATE NET INCOME TAX IN THE CASE OF NON-SHIFTING.

TAX EXTRACTION EFFECTS				TAX EXPENDITURE EFFECTS			
X = 1; MPC = .7; $K^- = 3\text{-}1/3$; $A^- = 0$.				X = 1; MPC = .8; $K^+ = 5$; $A^+ = 0$.			
	ΔI +	ΔC =	ΔY	ΔG +	ΔI +	ΔC =	ΔY
IMPACT →	—$ 10.00 ——	Leads to →	—$ 10.00	+$ 10.00 ——	Leads to ——	→	+$ 10.00
		—$ 7.00 →	— 7.00			+$ 8.00 →	+ 8.00
		— 4.90 →	— 4.90			+ 6.40 →	+ 6.40
		— 3.43 →	— 3.43			+ 5.12 →	+ 5.12
	—$ 10.00	—$ 23.33	—$ 33.33	+$ 10.00	0	+$ 40.00	+$ 50.00
					—$ 10.00	—$ 23.33	—$ 33.33
NET FISCAL POLICY EFFECTS →				+$ 10.00	—$ 10.00	+$ 16.67	+$ 16.67

Schema 5. Case III (C).

THE *FISCAL POLICY* EFFECTS OF THE CORPORATE NET INCOME TAX IN THE CASE OF COMPLETE SHIFTING.

TAX EXTRACTION EFFECTS				TAX EXPENDITURE EFFECTS			
$X = 1$; MPC = .7; $K^- = 3\text{-}1/3$; $A^- = 0$.				$X = 1$; MPC = .8; $K^+ = 5$; $A^+ = 0$.			
ΔI	+ ΔC	=	ΔY	ΔG	+ ΔI + ΔC	=	ΔY
IMPACT → — $ 10.00	Leads to	→	— $ 10.00	+ $ 10.00	Leads to	→	+ $ 10.00
	shifting						
+ $ 10.00 ←	— $ 10.00						
	— 7.00		— 7.00		+ $ 8.00	→	+ 8.00
	— 4.90		— 4.90		+ 6.40	→	+ 6.40
	— 3.43		— 3.43		+ 5.12	→	+ 5.12
0	— $ 33.33	=	— $ 33.33	+ $ 10.00	0 + $ 40.00		+ $ 50.00
					— $ 33.33		— $ 33.33
NET FISCAL POLICY EFFECTS →				+ $ 10.00	0 + $ 6.67		+ $ 16.67

Schema 6. Case III (D).

THE *FISCAL POLICY* EFFECTS OF THE CORPORATE NET INCOME TAX IN THE CASE OF PARTIAL SHIFTING.

TAX EXTRACTION EFFECTS				TAX EXPENDITURE EFFECTS			
$X = 1$; MPC $= .7$; $K^- = 3\text{-}1/3$; $A^- = 0$.				$X = 1$; MPC $= .8$; $K^+ = 5$; $A^+ = 0$.			
ΔI	$+$ ΔC	$=$	ΔY	ΔG	$+$ ΔI	$+$ ΔC	$=$ ΔY
IMPACT → $-\$10.00$	Leads to →		$-\$10.00$	$+\$10.00$	Leads to →		$+\$10.00$
Partial shifting ↓							
$+\$5.00$ ←	$-\$5.00$						
	-7.00 →		-7.00			$+\$8.00$ →	$+8.00$
	-4.90 →		-4.90			$+6.40$ →	$+6.40$
	-3.43 →		-3.43			$+5.12$ →	$+5.12$
$-\$5.00$	$-\$28.33$		$-\$33.33$	$+\$10.00$	0	$+\$40.00$	$+\$50.00$
					$-\$5.00$	$-\$28.33$	$-\$33.33$
NET FISCAL POLICY EFFECTS →				$+\$10.00$	$-\$5.00$	$+\$11.67$	$+\$16.67$

2. It is assumed in this case that 50% of the $ 10 tax, i.e., $ 5.00, is shifted forward and falls on real consumption. Part of the initial decline in investment is neutralized by the tax shifting process.

3. The negative tax extraction multiplier produces a $ 33.33 decline in national income.

4. The expenditure of the tax proceeds creates $ 50.00 of private income through the working of the positive tax expenditure multiplier. The *fiscal policy* effect in this case of partial tax shifting is the creation of new income of $ 16.67.

The preceding cases are intended merely to illustrate the manner in which the analysis of tax shifting and incidence can be integrated into the macroeconomic analysis of the fiscal policy effects of a given tax. The individual cases reveal that, under given assumptions, the corporate net income tax appears to be compatible with the objective of maintaining full employment and a high level of national income.

V. *Evaluation of Assumptions*

Consideration will be directed at this point to an evaluation of the assumptions underlying the preceding analysis. If economic theory of this type is to serve as a guide to an effective fiscal policy, the underlying assumptions must in some sense approximate the actual conditions operating in the economic setting to which the analysis applies.

Since the income-creation effects were identical in Cases III (B), III (C), and III (D), it would appear that the net fiscal policy effects of corporate net income taxation are of equal magnitude whether or not the tax is shifted. In other words, it would appear at first blush that the phenomena of shifting and incidence do not influence the ultimate employment effects of the tax. This, however, is not the case, and for several reasons. First, it will be noted that in these three cases, the final burden of the tax is assumed to fall upon investment and/or consumption, the two determinants of the level of national income and employment. If, on the other hand, it is assumed that part or all of the ultimate burden of the tax is shifted so as to come to rest on the current saving and/or past savings of individuals, *ex ante* consumption will not be reduced by the amount of the tax [14]). As a result, the induced reduction in

[14]) To the extent the tax burden is shifted forward to consumers, the pre-tax level of investment spending will, *ceteris paribus*, tend to be maintained.

national income, attributable to the negative multiplier working through the consumption variable, will be appreciably mitigated.

Thus, in those cases, e.g., Cases III (C) and III (D), where the corporate net income tax is shifted in full or in part to, say, consumer wage-earners, it is unlikely that consumption will be reduced initially by the full amount of the shifted tax burden. A lower level of current individual saving, consumer credit, or past personal savings, may be used to sustain the pre-tax level of real consumption. Moreover, in those instances where the corporate net income tax burden is shifted "internally" to stockholders in the form of lower dividend payments, it is even more unlikely that the level of real consumption spending will be reduced by the amount of the tax [15]). In an institutional setting where credit is granted freely, where large accumulations of highly liquid savings are available, and where there is a considerable concentration of ownership of corporate securities in the hands of individuals in the upper income groups, the repressive consumption effects of the shifted corporate net income tax can be offset at least in part in the short-run. In this respect, then, the tax shifting process will condition the *fiscal policy* effects of corporate net income taxation.

A second consideration makes the *fiscal policy* effects of corporate net income taxation dependent upon the shifting and incidence of the tax. Reference is made to the effect of the tax burden upon net yields, after taxes, and thus upon the level of planned corporate investment. In the absence of tax shifting, the corporate net income tax will impinge upon current as well as future yields, net of tax. By reducing the expected returns on planned investment, the incidence of the unshifted tax would tend to discourage investment outlays, at least in the more risky lines. Thus, if the burden of the tax rests in full on the corporate entities which serve as the focal point for investment decisions in a private enterprise system, the level of planned private investment may be curtailed in an amount in excess of the amount of the tax as such. That is, the tax dis-

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[15]) In the opinion of the present writer, it is important for analytical purposes to distinguish between that portion of the tax burden which falls upon the investing unit, the corporation, and that portion borne by the stockholder. The *fiscal policy* effects of the corporate net income tax will vary depending on whether the corporate entity or the shareholder bears the incidence of the tax. Internal shifting denotes the process of shifting the tax burden to the stockholder in the form of lower dividend payments.

investment coefficient may be greater than one. To the extent, however, that corporate entities find it possible and expedient to shift the largest share of the tax burden to shareholders, consumers, and employed factors, the direct repressive investment effects of the tax will be considerably neutralized. Corporate net yields, after taxes, will be preserved, and investment will be forthcoming even under a high tax rate structure. It is in this additional sense that the tax shifting process reduces the potential direct income destruction effects of the corporate net income tax. The level of investment spending may ultimately be reduced indirectly, however, through the operation of the deceleration effect if the final tax burden is shifted to consumption.

In making a tenable assumption with respect to the direct investment effects of an unshifted corporate net income tax, one must also consider the possible influence of the liquidity drain associated with the payment of the tax. Thus, in cases of non-shifting the initial reduction in investment associated with the impact (and incidence) of the tax might be compensated for, at least in part, at the expense of the firm's current and near-future liquidity position. Also, external financing sources may be used in many instances to maintain a given level of investment spending. Tax-induced shifts in the schedule of the marginal efficiency of capital will determine in large part the degree to which these internal and external sources of financing are utilized after a new tax or a tax at higher rates is imposed. If the tax burden falls on surplus elements of corporate return, and if external financing sources not directly affected by the tax are available to the corporate entity, investment spending need not be affected by the tax even in the case of non-shifting. Since in practice it is highly probable that private investment and consumption are not reduced by the full amount of the corporate income tax, the cases chosen tend to exaggerate the repressive effects of the *extraction* of corporate net income tax revenue. The tax shifting process serves to neutralize the potential adverse investment effects of the tax.

Up to this point the discussion has been concerned with an evaluation of the assumptions which pertain to the "primary" effect of the corporate net income tax on the levels of private investment and consumption spending. In determining whether the corporate income tax will have a neutral, negative or positive influence on national income, proper attention must also be directed to the as-

sumptions concerning the "induced" effects of the tax on consumption and investment.

The net induced effect on consumption spending will be conditioned by the value of the marginal propensity to consume in the extraction and expenditure areas of the fiscal picture; the MPC, in turn, determines the value of the negative multiplier (K^-) and the positive multiplier (K^+); the deceleration and acceleration coefficients condition the induced changes in private investment resulting from a given taxing-spending program. It is evident that the income-creating power of the corporate net income tax, or of any tax, depends in large part on the difference between its negative and positive leverage coefficient. These two variables determine the magnitude of the induced effects of a fiscal program on national income and employment.

The nature of the MPC of the taxpayer [16]) vis-a-vis the tax revenue recipient is of crucial significance in determining the induced *fiscal policy* effects of corporate net income taxation.

On the tax extraction side, the over-all effects on national income and employment are related to the actions of two groups of consumers, namely: (1) those who bear the incidence of the tax and thus experience a direct reduction in real income, and (2) those who experience a tax-induced decline in income as a result of the operation of the negative tax extraction multiplier. If these two groups of consumers are reluctant to give up their pre-tax level of real consumption, the value of the negative tax extraction multiplier may be smaller than the positive tax expenditure multiplier. For example, if the MPC operative on the tax extraction side assumes a value of zero, the negative tax extraction multiplier would equal 1. The income destruction associated with the tax extraction process would be limited to the amount of the tax [17]). The essential point is that as long as the MPC on the extraction side is smaller than the MPC of the tax expenditure income recipients, the corporate income tax will be income-creating *unless the tax destroys investment incentives.* On the expenditure side, government can channel the spending of the revenue from the corporate net income tax into streams which will reach income groups with a high propensity to consume. Even in the absence of such direct action, however, it is possible that the

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16) More accurately, the person who bears the incidence of the tax.

17) This assumes no deceleration effects, i.e. $A^- = 0$.

marginal propensity to consume of those who receive, spend, and respend the tax proceeds as they move from hand-to-hand through the income stream might be larger, or at least equal to, the marginal propensity to consume which determines the negative tax extraction multiplier.

The present writer holds the opinion that consumers will normally resist any encroachment upon an attained level of consumption whether tax-induced, or otherwise. This characteristic of consumer behavior will work to substantially reduce the income destruction effects of a shifted corporate income tax. In the instance where the tax burden is shifted to those in the upper income groups, i.e., by internal shifting to stockholders, the repressive consumption effects of the incidence of the tax will be minimal. Consequently, the induced income destruction effects will be moderated.

One further aspect of the macroeconomic model approach deserves consideration, namely, the proper assumptions concerning the values of the decelerator (A^-) and the accelerator (A^+). It is important to emphasize that the values of the decelerator and accelerator lack symmetry over the expansion and contraction phases of the business cycle [18]). Since the *fiscal policy* effects of the tax are dependent upon the negative and positive leverage coefficients, the cyclical effects of the corporate net income tax will vary accordingly.

It is certainly true that the destruction of income resulting from the operation of the negative tax extraction multiplier may induce further disinvestment. It is also true, however, that the process of disinvesting in existing fixed plant and equipment is largely a function of time. Real investment in fixed assets becomes a sunk-cost in the short-run. Induced disinvestment in response to tax burden increases will result in exit from the industry in the long-run. The short-run induced effects will ordinarily be of minor significance.

In the case of inventory investment, on the other hand, it is true that the corporate net income tax may produce some degree of short-run disinvestment. If the tax extraction decelerator is to operate, it will induce disinvestment in this component of private investment.

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[18]) In a consideration of the cyclical variation in the value of the accelerator, Professor J. R. Hicks has written: "It does, however, seem safe to conclude that the accelerator, in the form in which it persists into the slump, is a mere ghost of what it was in the Boom." See his *A Contribution to the Theory of the Trade Cycle* (London: Oxford University Press, 1950), p. 104.

In giving recognition to the possibility of the tax extraction decelerator, one must also recognize that many government expenditure programs will induce private investment. For example, the aircraft industry has expanded considerably under the impetus of heavy defense spending; the cement and other related industries will undergo investment expansion in response to the recent Federal highway legislation. Since the short-run process of disinvestment is restricted largely to inventories, whereas the induced investment will normally take the form of new plant and equipment as well as increases in inventory, it would appear that the tax expenditure accelerator may often be larger than the tax extraction decelerator. On balance, the tax expenditure accelerator will normally provide at least an offset to the income destruction effects of the negative tax extraction decelerator.

VI. *Conclusions*

The preceding evaluation of the assumptions underlying the analysis of the *fiscal policy* effects of the corporate net income tax lends support to the conclusion that the tax will commonly be income generating. This conclusion is grounded upon the following line of reasoning: First, since there is strong reason to believe that the tax is shifted, at least in part, in the imperfect market in the short-run, the repressive effect upon corporate investment is considerably lessened; second, part of the tax burden falls upon stockholders; the final burden, therefore, falls in part on current saving. Third, individual savings or credit may be used to sustain a given level of consumer spending in the case of forward shifting; fourth, there is strong reason to believe that the MPC which determines the negative tax extraction multiplier is smaller than the MPC on the expenditure side. Under a sound countercyclical fiscal policy the government could make a deliberate attempt to channel expenditures in directions in which the recipients of the expenditure have a high MPC; fifth, the action of the tax extraction decelerator will normally be counterbalanced by the tax expenditure accelerator; sixth. in cases where none of the tax burden is shifted, corporate savings or external financing may be used to sustain the pre-tax level of investment; seventh, to the extent that the incidence of the tax falls in large part on surplus elements of corporate return, the repressive investment effects will be small.

LA TRANSLATION, L'INCIDENCE ET LES EFFETS DE L'IMPOT SUR LE REVENU NET DES SOCIETES DANS UN SYSTEME MACROECONOMIQUE.

par GERHARD N. ROSTVOLD

RÉSUMÉ

Les effets sur l'emploi ou la *politique fiscale* de l'impôt sur le revenue net des sociétés sont conditionnés par la translation et l'incidence de l'impôt. Le but principal du présent article est de constituer le cadre d'une analyse permettant d'ntégrer la question microéconomique de l'incidence de l'impôt sur le revenu net des sociétés, à l'analyse des effets globaux de l'impôt sur l'emploi.

Dans la limite où l'impôt sur le revenu net des sociétés peut être reporté sur les consommateurs ou sur les moyens de production utilisés à court terme, la charge finale de l'impôt influence directement, nin l'investissement des sociétés, mais la propension à consommer. Dans ce cas l'effet sur l'investissement sera indirect et conditionné par le principe d'accélération. Let effets finaux sur le revenu immédiat et sur l'emploi de l'imposition sur le revenu net des sociétés, peuvent varier à la fois *quantitativement* et *qualitativement,* suivant le degré auquel l'investissement des sociétés et la propension à consommer sont en dernier lieu affectés par *l'incidence* de l'impôt. Si l'on a de fortes raisons de croire que l'impôt est répercuté, au moins en partie dans l'immédiat, un modèle macroéconomique approprié à l'analyse de l'incidence et des effets de l'impôt doit contenir cette hypothèse.

Le problème de la quantification des effets de la *politique fiscale* de l'imposition du revenu net des sociétés, nécessite la détermination de cinq valeurs numériques de base, à savoir:

1. Il est nécessaire de déterminer les limites dans lesquelles l'impact de l'impôt réduit l'investissement privé.

2. Dans les limites où l'on peut transférer l'impôt, il est nécessaire de déterminer l'effet de la charge de l'impôt sur la propension

à consommer. On doit aussi prendre en considération l'effet „compensateur" connexe sur l'investissement des sociétés.

3. Il est nécessaire de calculer les valeurs du multiplicateur négatif représentant le prélèvement fiscal (K^-) et des coefficients de ralentissement (A^-). Ceux-ci, à leur tour, déterminent le coefficient négatif de pesée du processus de prélévement fiscal.

4. En ce qui concerne les dépenses, il est nécessaire de savoir quelle fraction du produit de l'impôt est reversée dans le flux des revenus, sous forme de dépenses en biens et services génératrices de revenus.

5. Il est nécessaire, enfin, de calculer les valeurs du multiplicateur positif d'affectation de l'impôt (K^+) et des coefficients d'accélération (A^+) qui, à leur tour, déterminent le coefficient positif de pesée. Quand des valeurs ont été attribuées aux variables énumérées, les effets de *politique fiscale* provenant de l'imposition nette des sociétés, sont définis. Pour toute combinaison donnée de ces variables, l'impôt se révèlera neutre, négatif ou positif, pour autant qu'il s'agisse de son effet sur le revenu national et l'emploi. (On présente une suite de cas pour illustrer la manière dont l'analyse de la translation et de l'incidence de l'impôt peut être incorporée dans l'analyse macroéconomique des effets de la politique fiscale pour un impôt donné.)

L'analyse comporte comme conclusion, que l'impôt sur le revenu net des sociétés est compatible avec l'objectif du maintien du plein emploi et d'un niveau élevé du revenu national. La conclusion est fondée sur le raisonnement suivant: D'abord, comme il y a de fortes raisons de penser que, dans l'immédiat, l'impôt est répercuté au moins en partie dans un marché imparfait, l'effet de frein sur l'investissement des sociétés est fortement diminué. Ensuite, une partie de la charge de l'impôt pèse sur les actionnaires; la charge finale en conséquence pèse en partie sur l'épargne courante. En troisième lieu, on peut recourir à l'épargne individuelle ou au crédit pour soutenir un niveau donné de dépenses de consommation dans le cas d'une répercussion en avant. Quatrièmement, on a de fortes raisons de croire que le M.P.C. (propension marginale à consommer), qui détermine le multiplicateur négatif du prélèvement fiscal, est plus petit que le M.P.C. du côte dépenses. Cinquièmement, l'action de ralentissement du prélèvement fiscal sera normalement contrebalancé

par l'accélération provenant de l'affectation de l'impôt. Sixièmement, dans les cas où il y a absence totale de répercussion des charges de l'impôt, on peut utiliser l'épargne des sociétés ou le financement extérieur pour soutenir le niveau d'investissement antérieur à l'impôt. Septièmement, dans la mesure où l'incidence de l'impôt pèse en grande partie sur les bénéfices sociétaires supplémentaires, les effets de frein seront faibles sur l'investissement.

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RÉSUMÉ

Le Professeur Giorgio Stefani enseigne la science des finances publiques à l'Université de Ferrara (Italie). Il pourrait tout aussi bien enseigner l'économie politique. Se maintenant dans la grande tradition italienne, le Professeur Stefani s'attache à travers l'ensemble de ses travaux et particulièrement dans l'ouvrage que nous analysons aujourd'hui à réconcilier la science des finances publiques avec celle de l'économie; il entend même intégrer l'une à l'autre.

M. Stefani avait déjà publié certaines études très remarquées sur les effets économiques des dépenses de redistribution des revenus, qui s'écoulent par le canal des budgets ou des institutions de sécurité sociale. Une de ses plus importantes études sur ce sujet a été publiée par l'Institut International de Finances Publiques dans le compte rendu de son Congrès de Rome (1956). Il a acquis également une place importante parmi ceux qui étudient l'harmonisation des fiscalités au sein du Marché Commun.

Voici qu'aujourd'hui le Professeur Stefani s'adresse à un principe de la „nouvelle économie de bien être". Car après avoir épuisé toutes les ressources des dépenses de redistribution des revenus, selon la théorie Pégouvienne, la „nouvelle école" a pris pour thème et pour thèse un principe économique „objectif": les biens et les services rendus devraient l'être toujours à leur coût de production marginal. L'idée n'est pas récente, mais elle à été exprimée par Kaldor, par Hicks et avec une particulière force par l'économiste américain Harold Hotelling — the General Welfare in Relation to Problem of Taxation and of Railway and Utility Rates; *Econometrica*, 1938.

Le principe ne ferait que suivre la règle d'or de l'économie privée, s'il devait être réservé aux cas où la production est soumise à un coût de production croissant. Mais tel n'est point le cas. On sait que dans le cas de coût de production décroissant, la règle de l'éco-

nomie privée est de vendre au coût de production moyen; la vente au coût de production marginal etant dans cette hypothèse inférieure au coût moyen lui-même. M. Stefani relève que dans la pratique il y a beaucoup d'entreprises publiques qui produisent à coût décroissant.

C'est en quoi l',,économie de bien être" entend distinguer la gestion des services publics de celle des entreprises privées. Elle y voit la possibilité d'accoître l'efficacité générale de l'économie et la productivité de l'économie privée alle même. Comme l'application de ce principe laisserait les services publics en déficit, par hypothèse même, il incomberait à l'impôt de payer la différence. Autrement dit encore le prix paierait les éléments variables du coût de production, tandis que l'impôt couvrirait ses éléments fixes.

C'est ce principe et ses conséquences que discute l'ouvrage du Prof. Stefani. Il serait trop long de reprendre ici toutes ses objections. Qu'il suffise dénoncer celles-ci:

— difficulté d'apprécier le coût de production marginal en courte période, sinon par référence au passé,

— impossibilité de séparer, pour leur réserver un traitement différent, les éléments fixes des éléments variables du coût de production en longue période.

— cercle vicieux que de vendre au coût marginal dans un régime de coût décroissant car chaque baisse des prix appelle de nouvelles couches d'acheteurs. C'est-à-dire une augmentation de la production qui engendre de nouvelles baisses et des coûts et des prix. L'économie publique court dans ces conditions après son équilibre sans jamais l'atteindre,

— incidence des coûts marginaux discontinus, lorsque l'expansion de la production oblige à mettre en oeuvre des nouvelles unités de production,

— au surplus de quel coût marginal s'agit-il? Du coût marginal dans l'hypothèse de développement ou de contraction de la production. Suppose-t-on que le coût des facteurs de production lui-même reste immuable -ce qui serait irréaliste ou admet-on sa croissance? Autant d'imprécisions de la théorie.

A considérer l'application du principe à court terme, on fera mieux de se rérérer au coût moyen des unités produites en cherchant à le réduire de la pert des coûts fixes.

Les objections ne sont pas moindres si l'on considère son application en longue période, puisque lorsque les capacités de production ont le temps de s'adapter à l'expansion des besoins, les prix

tendent à s'établir spontanément au niveau du coût moyen le plus bas, c'est-à-dire que le coût moyen et le coût marginal tendent à coïncider.

En définitive toutes cette discussion parait oiseuse au Prof. Stefani. Car entre la théorie de la vente au coût moyen et celle de la vente au coût marginal, il existe un troisième terme — tout au moins en ce qui concerne la gestion des services publics, qui sont généralment des monopoles —; il s'agit de l'échelonnement des prix. Si la méthode n'est pas applicable à tous ls services publics, elle l'est tout au moins à certains.

Cette conclusion atténue la rigueur du raisonnement du Prof. Stefani et laisse à la gestion des services publics une marge de manipulation des prix qui suffit à leur fonction d'intérêt général.

Au surplus le déficit laissé par l'application du principe de la vente au coût marginal — en régime de coût décroissant — doit être couvert par l'impôt. C'est le deuxième panneau de l'ouvrage du Prof. Stefani, qui constitue ainsi un dyptique. C'est pour lui l'occasion de développer des considérations sur les effets économiques et sociaux des impôts directs et des impôts indirects.

On sait la position des doctrines au sujet de ces deux groupes d'impôts: l'impôt direct agissant sur les revenus nets et de façon progressive, laisserait intact le système des prix et serait donc le plus neutre qui soit au point de vue économique. Les impôts indirects agiraient au contraire sur le système des prix et par conséquent sur les équilibres économiques et sociaux fondamentaux et de façon non discriminatoire. Les premiers sortiraient de ce débat à la fois moins nocifs et plus équitables que les seconds.

A la lumière de cette analyse l'effet redistributif du principe de la vente au coût marginal déficitaire apparait clairement. D'après les partisans de l'économie de bien être, la confiscation des rentes à laquelle procède l'impôt direct serait affectée à l'expansion des consommations sub-marginales, par l'intermédiaire du déficit des services publics. Coup double, si l'on peut dire, puisque les revenus nés de la rareté servent par là l'abondance.

Nous le confessons. Nous avons personnellement été séduit par la formule (voir Théorie Economique des Finances Publiques. Ed. Baude 1947). Mais nous devons également avouer que la démonstration du Prof. Stefani nous a troublé, en tant notamment qu'il démontre comment l'impôt direct peut nuire à la productivité de l'économie. A ce compte, l'impôt aboutirait à un résultat inverse de

celui auquel on prétend arriver par la gestion systématiquement déficitaire des services publics.

Dans cette analyse fiscale aussi les observations du Prof. Stefani sont extrêmement intéressantes. Il faut dire que „l'économie de bien être" en sort fort malmenée dans des principes qu'elle tenait pour acquis.

M. Stefani ne dément certainement pas les objectifs de l'économie de bien être, mais il conteste les vertus de la prétendue objectivité de la „nouvelle économie du bien-être". Il est impossible de s'occuper du bien être des hommes sans exprimer des jugements de valeur subjective et sans s'occuper des effets redistributifs des impôts et des depenses de l'Etat.

C'est dans une expansion totale et globale de l'économie qu'il cherche la véritable solution et en cela il aurait bien raison.

M. MASOIN

PROFESSOR

ERIK LINDAHL

* 21. NOVEMBER 1891

† 6. JANUAR 1960

AVIS

La Revue Public Finance/Finances Publiques sera incessament reprise par une Fondation créée à l'intervention de Madame M. C. O. Monod de Froideville-de Bruyn Kops, veuve et héritière du fondateur-propriétaire de la présente revue trimestrielle. Madame Monod a fait à cette Fondation abandon de tous ses droits.

Le nom de la Fondation sera „Stichting Tijdschrift voor Openbare Financiën". Son siège statutaire sera à La Haye (Pays-Bas).

Madame Monod de Froideville a désigné comme les premiers administrateurs de la Fondation les Professeurs Maurice Masoin, Alan Turner Peacock, Bernard Schendstok et Paul Senf. L'administration peut être complétée par voie de cooptation parmi les membres de l'Institut International de Finances Publiques; les membres du Conseil, y compris ceux cités plus haut, démissionnent périodiquement selon un ordre établi.

En attendant la nomination éventuelle d'un Comité de Rédaction spécial, dont les administrateurs de la Fondation ne feraient pas partie, les administrateurs de la Fondation assumeront ces fonctions.

L'administration souhaite que les auteurs qui ont jusqu'à présent confié leurs travaux à la Revue, ainsi que les abonnés maintiendront leur confiance à ce Bulletin.

La correspondance doit être adressée au Professeur Paul Senf (Eichendorffstrasse, 13 à Scheidt, Saar/Allemagne) qui a accepté de remplir les fonctions de Secrétaire et Trésorier.

Les paiements effectués à la Revue peuvent être versés à la Twentsche Bank, La Haye (Pays-Bas) Tournooiveld 5, où un compte fut ouvert au nom de la Fondation. On trouvera les prix de l'abonnement pour 1960, à la dernière page de la présente publication.

Des informations ultérieures seront données dans le numéro suivant de la Revue.

MAURICE MASOIN, Président,
PAUL SENF, Secrétaire et Trésorier.

NOTICE

The Public Finance Review will be forthwith resumed by a Foundation which has been created at the instance of Mrs. M. C. O. Monod de Froideville-de Bruyn Kops, widow and heiress of the promoter and owner of this quarterly Review. Mrs. Monod has surrendered all her rights to this Foundation.

The Foundation will be called the „Stichting Tijdschrift voor Openbare Financiën". Its statutory office will be situated in The Hague. (Netherlands).

Mrs. Monod de Froideville has appointed as first administrators of the Foundation Professors Maurice Masoin, Alan Turner Peacock, Bernard Schendstok and Paul Senf. The administrative body can be completed by means of coopting any of the members of the International Institute for Public Finance; the members of the Council, including those above mentionned, retire periodically according to a fixed order.

Till the eventual appointment of a special Editorial Committee in which the administrators of the Foundation would not participate, the Administrators of the Foundation will assume this task.

The administrative body hopes that the authors who have, up to now, submitted their articles to the Review as well as the suscribers will continue to give their patronage to the Review.

Letters should be addressed to Professor Paul Senf (Eichendorffsstrasse, 13, Scheidt, Saar/Germany) who has agreed to carry out the office of Secretary and Treasurer.

Payments for the Review can be made to the Twentsche Bank, The Hague (Netherlands), Tournooiveld 5, where an account has been opened for the Foundation. The subscription rates for 1960 will be found on the last page of this periodical.

Further information will be given in the next issue of the Review.

MAURICE MASOIN, President,
PAUL SENF, Secretary and Treasurer.

EXCISE TAX INCIDENCE IN AN IMPERFECTLY COMPETITIVE ECONOMY [1])

by PAUL WELLS

University of Illinois

This paper presents an aggregate analysis of excise tax incidence in an imperfectly competitive closed economy. Although a great deal of attention has been devoted to developing theories of incidence for perfectly competitive economics in recent years [2]), little has been done in the direction of extending such theories to encompass imperfectly competitive economics. Perhaps the reason for this lopsided state of affairs is that previous writers have, for the most part, used very simple general equilibrium models as their main research tool. Though adequate, possibly, to perform the task for which they were designed, those models appear inadequate to deal with tax incidence in a "world of monopolies".

In order to take into account the existence of monopoly power, this writer has found it necessary to abandon the general equilibrium method of analysis and use instead an aggregate equilibrium model of the Keynesian type. Toward this end a theoretical model of such an economy is developed in Section I of this paper. Section II then applies this model to the problem at hand, while Section III follows with a generalization of the argument.

I. THE MODEL

The aggregate model used in this chapter consists of two relations between the general price level, P, and the volume of employment,

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1) An earlier version of this paper was read to the September, 1956, meeting of the Western Economic Association. The author is indebted to Professors B. F. Haley and Tibor Scitovsky for many helpful suggestions.

2) *C. f.* E. R. Rolph, "A Proposed Revision of Excise-tax Theory," *Journal of Political Economy,* April 1952, LX, 102-17, and "A Theory of Excise Subsidies," *American Economic Review,* Sept. 1952, XLII, 515-27; R. A. Musgrave, "On Incidence," *Journal of Political Economy,* August 1953, LXI, 306-23, and "General Equilibrium Aspects of Incidence Theory," *American Economic Review,* Proceedings, May 1953, XLIII, 504-17; J. A. Stockfisch, "Excise Taxes: Capitalization-Investment Aspects," *American Economic Review,* June 1954, XLIV, 287-300; Paul Wells, "A General Equilibrium Analysis of Excise Taxes," *American Economic Review,* June 1955, XLV, 345-359. See also J. F. Due, "Toward a General Theory of Sales Tax Incidence," *Quarterly Journal of Economics,* May 1953, LXVII, 253-66.

E. These relations are: an "employment-determining" function, $E = g\ (P)$; and a "price-level-determining" function, $P = f\ (E)$. The task performed by the first function, in which E is the dependent variable and P the independent variable, is to assign one particular level of employment to each value of the general price level. As we shall later show, selecting a general price level determines the real supply of money, and this in turn determines the level of employment. The second function, in which E is the independent and P the dependent variable, assigns one particular value of the general price level to each value of employment [3]). In effect this function states that the general level of prices is determined by the demand for commodities which, in turn, is tied, as we know from national income analysis, to the level of employment.

To build these two relations up from the more fundamental features of the economic system envisaged, we need to describe the system we are considering. To do so, we need, in addition to those assumptions usually made by the writers in the field of imperfect competition [4]), the following assumptions and definitions:

1. The economy is stationary, in the sense that neither the size of the labor force nor its productivity changes.

2. Real income is devided among farmers, workers, entrepreneurs, bondholders, and the government.

3. Two types of commodities are produced: an industrial commodity called "cloting" and an agricultural commodity called "food". We suppose that entrepreneurs are free to invest in inventories of clothing and to use labor for building capital equipment instead of producing clothing. In addition, we assume that all labor required to produce food is supplied by farm owners (farmers). Thus the labor force we speak of is solely an industrial labor force.

4. The general price level P is defined as the weighted average of the prices of food and clothing.

5. The amount of unemployment, U, is defined to be the number of industrial workers unemployed. Because of assumption (1),

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[3]) We should not be surprised to find our two variables P and E appearing in the dual roles of first an independent variable in one equation and then a dependent variable in the other equation. Such "duality" is common enough in economics. The following widely accepted model of price determination in perfectly competitive markets is a good example of this.

Let $p = (q)$ be a demand function for some commodity. This function states the maximum price which can be charged in order to sell any given amount q of the commodity in question. Let $q = (p)$ represent the supply curve of the commodity in question. In this set of equations both p and q appear as dependent and independent variables.

[4]) Cf. Joan Robinson, *The Economics of Imperfect Competition* (London: Macmillan and Company, 1933), Chapter 2.

which states that the size of the labor force is fixed, a change in the level of employment (unemployment) inplies an exactly similar change of opposite sign in the level of unemplayment (employment).

6. The price of food is determined by supply and demand in perfectly competitive markets. Furthermore, we assume that the supply of food varies directly with the relative price of food, and that agricultural price and output adjustments take place instantaneously so that this market is always in equilibrium.

7. The money wage rate received by industrial workers is determined by a process of bargaining between trade unions and entrepreneurs. We assume that trade unions always succeed in establishing their wage demands which are: (a) to maintain a fixed money wage rate in the event of falling prices and employment; and (b) to maintain a fixed real wage rate in the event of rising prices and employment.

8. Entrepreneurs follow the full cost pricing principle and set the price of clothing by adding a constant percentage profit margin to average total cost. The price so determined is the net price of clothing. In addition, we assume that entrepreneurs all have identical cost functions, that their average total costs are invariant over a fairly wide range of output, and that they do not consider the tax to be a part part of their costs.

9. The nominal supply of money is fixed.

Additional, but more familiar, assumptions will be introduced into the course of the argument as they are needed.

The two functions making up our model that we derive from these assumptions are, again:

I. $E = g\ (P)$. This function states the volume of employment that will obtain for each price level. By assumption (9) — that the nominal supply of money is fixed — selection of a value of P determines the real supply of money. Given the consumption and investment functions of the community there will be an equilibrium level of income and employment associated with the particular real supply of money the chosen P determines. This equilibrium level of income will be that level for which the excess demand for money is equal to zero.[5]). This, in turn, implies that the excess demands for both commodities are also equal to zero. Thus the economic significance of this function is that it is the locus of points such that the excess supplies of both commodities are equal to zero. That is, points on $g\ (P)$ obey Say's law.

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[5]) For a more complete discussion of this equilibrium condition see Oskar Lange, *Price Flexibility and Employment* (Bloomington: The Principia Press, 1944), Chapter 3.

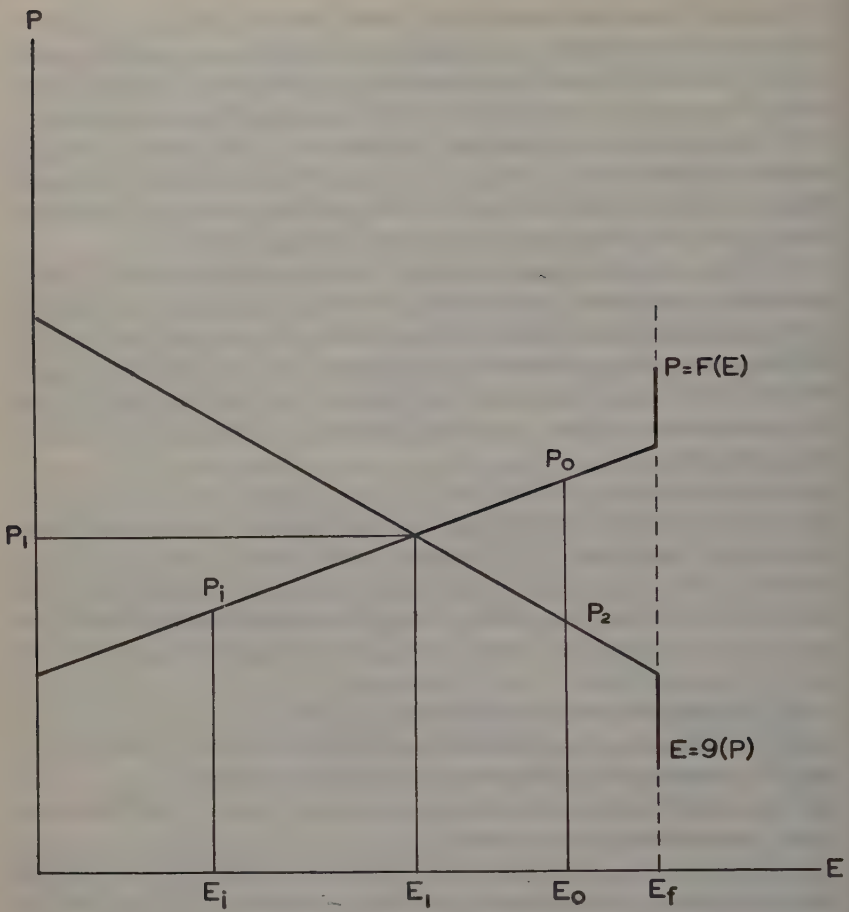

Figure 1

For our purpose, though, the most important property of this function is not its initial position but its slope. (See Figure 1). Since P is the independent variable in this function, we can develop the latter's slope by considering the change in the level of employment that would result from an increase in the general price level. To begin with, we shall assume an increase in P which leaves relative prices unchanged. Later, when questions of tax incidence are involved, it will be necessary to relax this assumption.

A rise in the general price level will cause both the real consumption expenditures of bondholders and the real investment expenditures of entrepreneurs to fall. Bondholders' spending will fall because the rise in the general price level reduces the real supply of money and thus, with unchanged real demand for money,

forces up the rate of interest [6]). The incomes, and hence consumption expenditures, of workers, farmers, and entrepreneurs remain unchanged — those of workers and entrepreneurs by assumptions (7) and (8), and farmers by our assumption (above) that the increase in P leaves relative prices unchanged — as the price level alone rises. Hence, the above-described initial decrease in real consumption and investment spending will, via the Keynesian multiplier process, further decrease income and employment. Eventually, a lower level of employment will be established to correspond to the higher general price level. This will occur when the excess supplies of both clothing and food (and hence the excess supply of money) are all equal to zero once again; *i.e.*, when the multiplier process has worked itself out.

The amount by which employment decreases as the result of a given increase in the general price level depends upon: (a) the absolute size of the bondholder group and its marginal propensity to consume; (b) the amount by which the rate of interest increases; (c) the community's (other than the bondholders') marginal propensity to consume, which determines the magnitude of the multiplier process; and (d) the effect of excess capacity (which appears as employment and output fall) on the investment expenditures of entrepreneurs.

II. $P = f(E)$. This "price-determining" function relates a general price level to each value of employment. That is, $f(E)$ states the general price level that will obtain for each level of employment. To understand how such a function can be defined, let us consider the following sequence of events. First, suppose we fix a definite value, say E_i (Figure 1), for the independent variable, employment, and keep it fixed throughout the argument. Next assign an arbitrary price to food and a wage rate to labor. With this information entrepreneurs will be able — by assumption (8) — to set the price of clothing. These two commodity prices together now define a general price level P_i. If it so turns out that P_i defines a real wage rate which unions find satisfactory, and furthermore it is turns out that the excess demand for food at its arbitrarily assigned price is equal to zero, then this particular P_i will be the general price level, $f(E)$, associated with E_i. The reason why, given E_i, P_i is an equilibrium value of the general price level is

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[6]) Since we assume relative prices have not been changed by the increase in the general price level, the marginal efficiency of investment remains unchanged. Hhat is, we assume that whatever stimulating effect rising clothing prices might have on investment is offset by the depressing effect of rising factor prices.

that: (a) the excess demand for food is equal to zero; (b) the money wage rate is such that the wage demand of the union is satisfied; and (c) the price of clothing is such that entrepreneural profit margin demands are satisfied [7]). If all three prices are in equilibrium, P_i will obtain when E_i occurs. Thus the economic significance of this function is that it is the locus of points for which unions, entrepreneurs, and the market for food are all in equilibrium at the prices that actually obtain.

Again, for our purposes, it is the slope of this relation which is important. Since employment is the independent variable, the slope of $f(E)$ can be derived by considering the change in the general price level that would result from a small change in employment. If the entrepreneurs minimize the total cost of producing output, a decrease in employment implies a decrease in output and income. With the supply of money fixed, and with the community's marginal propensity to consume greater than zero but less than one, a fall in income will lower consumption and investment expenditures. As aggregate spending falls the demand for food will also fall, and, as a consequence of assumption (6), the price of food will decrease. Now a decrease in the price of food alone would be enough to lower the general price level, so we can conclude that the general price level is on increasing function of the level of employment. However, if the production of clothing uses food as an input, when by assumption (8) — that entrepreneurs set the price of clothing so as to maintain their real profit margin in terms of clothing constant — the price of clothing will fall also. Thus, whether or not food is used to produce clothing, a decrease in employment will lower the general price level. This is a necessary result if unions and entrepreneurs are to be in equilibrium with respect to the prices they receive, and if the food market is also to be in equilibrium.

The rate at which the general price level falls as employment falls depends upon: (a) the weight given food in the definition of the general price level; (b) the income elasticity of demand for food and the elasticity of supply of food; and (c) the importance of food in the production of clothing.

Together, these two functions determine the equilibrium value of the level of employment and the general price level. In addition, the intersection of these two curves is a point of stable equilibrium because a movement away from this point (E_1, P_1, Figure 1) would

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[7]) It should be noted that a clothing price that satisfies the profit-margin demands of entrepreneurs need not be a price at with the excess demand for clothing is equal to zero.

generate forces tending to bring the system back into equilibrium. To illustrate this, let us suppose E_0 to be a possible value of employment of the system. In this P_0 states the general price level which would actually obtain if employment were equal to E_0. However, the general price level which would ensure zero excess supplies for the two commodities if employment were equal to E_0 is P_2. Thus a general price level of P_0 in the event of employment of E_0 would bring about an excess supply of clothing [by assumption (6) the excess supply of food will always be equal to zero] which, in turn, would lead to a fall in both employment and in the general price level until the equilibrium of the system were once again established at the point (E_1, P_1). To summarize: P_1 is the equilibrium price level for the system because it is the only price level at which the wage demands of unions and the profit margin demands of entrepreneurs can be satisfied simultaneously.

II. THE EFFECT OF AN EXCISE TAX ON PRICES, EMPLOYMENT, AND WELFARE

Let us assume, to begin with, that full employment obtains in our model, and that P_f (Figure 2) is the general price level at which all the necessary equilibrium conditions can be satisfied when there is no unemployment. Again let us recall that $f(E)$, in addition to stating the prive level which will obtain at full employment, states the various price levels which will obtain at various other levels of employment. Now let us suppose that the government demands an additional x per cent of output and decides to finance its additional demand entirely by levying an excise tax of x per cent on both commodities. The effect of such a tax will be to destroy the price-output equilibrium of the system by causing the general price level to be higher than it otherwise would be, for the tax will cause the prices of both food and clothing to rise. This increase in the general price level for all levels of employment will reveal itself in our model as an upward shift in $f(E)$. In Figure 2 this shift is shown by replacing $f(E)$ with $f^*(E)$.

The extent to which the general price level must rise —that is, the amount by which $f(E)$ must shift upward in order to effect a transfer of x per cent of output from the private sector to the government — will necessarily be greater than the initial rise in prices caused by the excise tax. The reason for this is that as prices initially rise, due to the first impact of the tax, the real wage rate

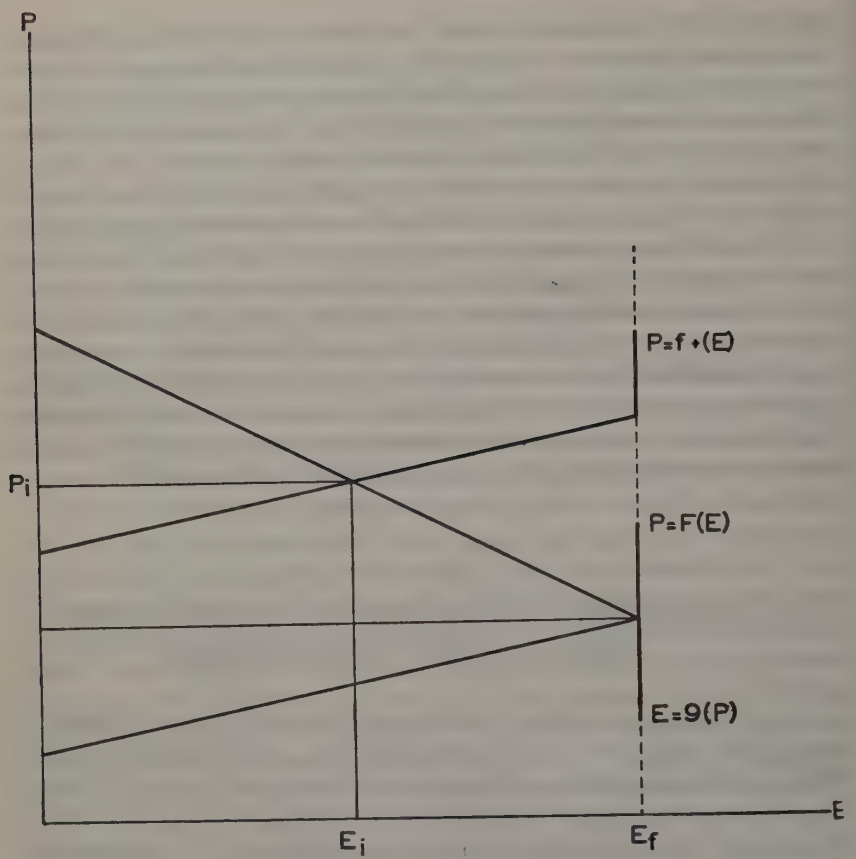

Figure 2

of workers will fall below its equilibrium value [8]). Unions, realizing that the real wage has fallen because prices have risen, will renegotiate money wages at a sufficiently higher level so as to restore the real wage rate to its previous value. This, in turn, will bring about a second round of increase in the price of clothing which, in its turn, will again bring on a second round of increase in the money wage rate. Thus both the price of clothing and the money wage rate will spiral upward as a result of the excise tax. As the money incomes of workers and entrepreneurs rise along with the price of clothing, the money demand for both commodities will also increase.

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[8]) Since entrepreneurs — according to assumption (8) — simply raise the price of clothing by the amount of the tax when a tax is levied, their profit margin does no fall below its equilibrium value.

This will cause the price of food to rise so that it too will contribute to, and share in, the general inflationary movement [9]).

It is obvious from this that if every group in the economy — farmers and rentiers as well as workers, entrepreneurs, and the government — possessed sufficient monopoly power to raise its money income sufficiently to maintain its real income [10]), prices would continue to rise indefinitely.

If, however, there are groups in the economy with insufficient monopoly power to achieve this, the rise in the price level will be finite. In our model it is the rentier and the farmer who cannot raise their money incomes at will, and so are liable to suffer a fall in their real income as prices rise. Bondholders by definition cannot adjust their money incomes upward in the event of inflation; necessarily then, their share of a given output will fall as the general price level rises. Farmers, like bondholders, do not possess the economic power to force upward adjustments in their money income; nevertheless, they need not necessarily suffer a fall in real income. To see why this is so, let us again (or rather, continue to) suppose that the level of unemployment remains unchanged as prices rise. Now as the general price level rises, the real demand for food and clothing on the part of bondholders will fall. If the government were to increase its real demand for the two goods so that the net price of food did not fall relative to the gross price of clothing, then the real income of farmers would not be reduced by the inflation. In this case, almost the entire burden of the tax would fall on bondholders [11]), and the general price level would continue to increase until the reduction in real income suffered by bondholders just equaled the increased share of real income demanded by the

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[9]) From these general considerations we cannot say whether the amount of food supplied will increase or decrease as its money price rises. We have assumed [assumption (6)] the supply of food to be a function of its relative price and not its absolute price. Possible chainges in the relative price of food will be discussed below.

[10]) It should be noted that: (a) unions can maintain the total real income of workers constant by maintaining the real wage rate constant only if the total volume of employment remains unchanged; and (b) entrepreneurs can maintain their total real income constant by maintaining their real profit rate constant only if both total output and its composition remain unchanged. Since we are at present discussing the extent to which the f function *shifts*, in response to an excise tax, we abstract from changes in output. Therefore, when it is asserted that the real income of some particular group can be maintained constant by maintaining its real wage rate or real profit rate constant, we mean this to be true for given values of unemployment only. After completing the analysis of the "f-shift" changes in employment will be considered.

[11]) Because the net price of clothing has fallen relative to both the gross price of food and clothing entrepreneurs will suffer somewhat from the tax.

government. The real income received by workers, farmers, and entrepreneurs (for all practical purposes) [12]), at given levels of employment would be the same as before the tax and the ensuing inflation.

In addition to depending on the size of the tax and the behavior of unions and entrepreneurs, the magnitude of the upward shift of $f(E)$ depends upon the way the government spends its tax receipts on the two goods and the pretax share of income received by bondholders.

Depending on whether the government spends a greater or smaller proportion of its tax receipts on food than the taxpayers would have done, the price of food relative to that of clothing will rise or fall. In the first case, part of the tax would be borne by farmers; in the second case, the farmers would be made better off than before and the bondholders would be forced to bear, not only the entire burden of the tax, but also the burden of the enhanced welfare of farmers. As to the effect of the pretax share of income received by bondholders, the smaller this is, the greater will be the upward shift of $f(E)$, given the change in the relative price of food. This is so because a given increase in prices will reduce the real income of rentiers, and thus their spending, by a smaller absolute amount, the smaller their pretax share of income. Thus, to reduce this group's income by a fixed amount, a larger price inflation is required the smaller their pretax income.

Having established a number of the more important determinants of the size of the "$f(E)$ *shift*" we shall now locate the new equilibrium of the system and analyze the distribution of the tax burden associated with this new position. Figure 2 shows that a new equilibrium will be established at the point (E_1, P_1); for this is the only point in the E-P plane which now satisfies all the equilibrium conditions of the system. As compared with the pretax equilibrium (E_f, P_f), (a) the general price level has risen by (P_1-P_f); (b) employment has fallen by (E_f-E_1); (c) the ensuing unemployment is confined to the industrial sector; (d) the real wage rate is the same as before, although the total real wage bill has fallen because unemployment has increased; (e) the real profit margin is the same as before, although the total real income of entrepreneurs is smaller because output and sales are now smaller; (f) the government's share of output has increased by x per cent of output; and (g)

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[12]) Entrepreneural real income would fall somewhat because they set the price of clothing by marking up their average total costs by an amount such that the resulting profit margin they received was always a constant proportion of the net price of clothing (assumption (8)) and not the gross price of clothing.

almost the entire burden of the tax would be borne by bondholders if the relative price of food were to remain unchanged [13]). Bondholders will be forced to bear a burden greater (less) than the tax if the price of food rises (falls) relative to the price of clothing. Thus, the distribution of the tax burden depends upon the distribution of monopoly power [14]) among the four groups making up the private sector as well as upon the change in relative prices that occurs.

We note that since E_1 is less than E_f there is connected with the excise tax an "additional" burden which in no way corresponds to the increase in the tax receipts of the government [15]). This additional burden is the increase in unemployment caused by the tax. It is borne by two groups: (a) the workers who have become unemployed; and (b) the entrepreneurs whose sales and profits have decreased.

It is probably unreasonable to assume that unions will be able to maintain a constant real wage rate in the face of growing unemployment, and that entrepreneurs will be able to maintain a constant profit margin in the face of decreasing sales and growing excess capacity. A more reasonable assumption might be that both the real wage demands of unions and the profit margin entrepreneurs demand will fall with falling employment and sales. Thus for every combination of a real wage rate and a profit margin demand which obtain at various levels of employment a relation between P and E will be defined. Hence, in Figure 3 we have a family of such curves $f_1(E)$ through $f_5(E)$, with the higher index denoting a higher value for the combined wage-profit demand. Associated with each level of employment and sales there will be a real wage demand and a value for the profit margin which are relevant. Thus for every level of employment and sales there is a price level which satisfies these less rigorous demands of entrepreneurs and the union. The locus of such points is indicated by the function $F(E)$ (Figure 3).

With unions and entrepreneurs willing to accept a smaller share of output as employment and sales fall, we see that prices need not rise by as much, nor employment fall by so much, in order to effect the necessary transfer of resources from the private sector

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13) It should be noted that (c), (d), and (e) are true by assumption.

14) By monopoly power is meant the bargaining strength, or capacity, of an idividual or group to maintain the same (or increased) real prices for its services or products as the general price level rises (or falls).

15) Cf. R. K. Davidson, "The Alleged Excess Burden of an Excise Tax in the Case of an Individual Consumer", *Review of Economic Studies*, XX, (1953), 209-15.

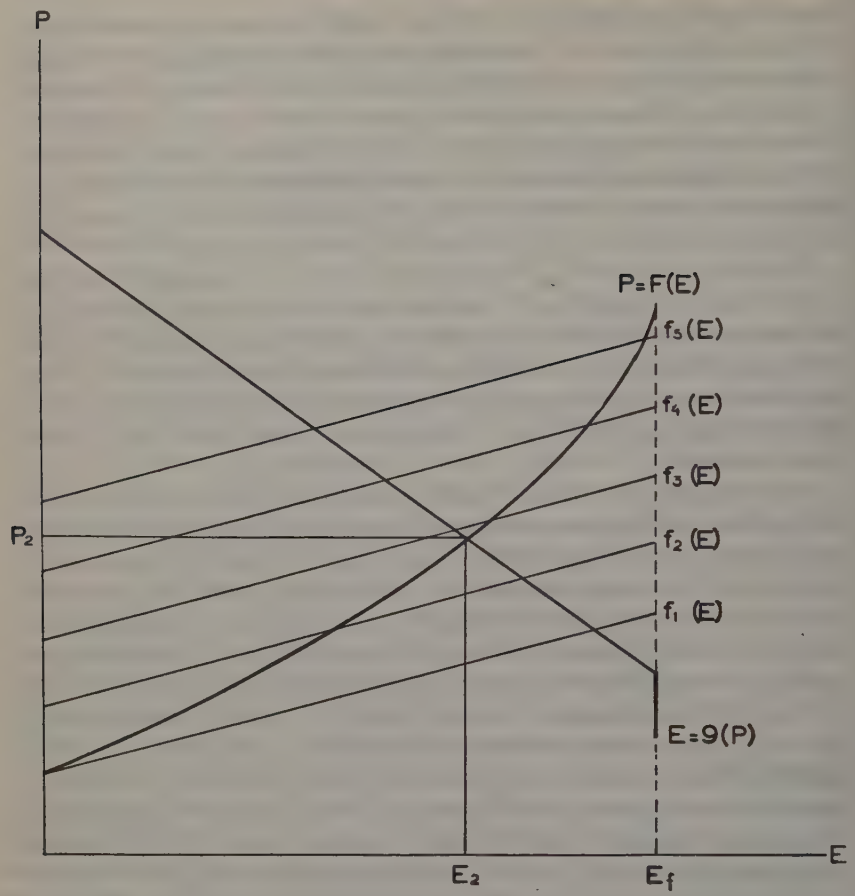

Figure 3

to the government. The intersection of $F(E)$ with $g(P)$ will determine the equilibrium position of the system under these assumptions. It is given, in Figure 3, by the point (E_2, P_2).

Compared with the point (E_1, P_1) in Figure 2, (E_2, P_2) is an equilibrium at which: (a) employment is higher by (E_2-E_1); (b) the general price level is lower by (P_1-P_2); and (c) the real wage rate and the profit margin are both lower.

The burden of the tax is now distributed among workers and entrepreneurs as well as among rentiers and possibly farmers. The additional unemployment burden of the tax is smaller than before, but can still be considered to be borne by the workers who are unemployed, and the entrepreneurs whose firms are operating at less than full capacity.

The greater the degree to which unions and entrepreneurs are

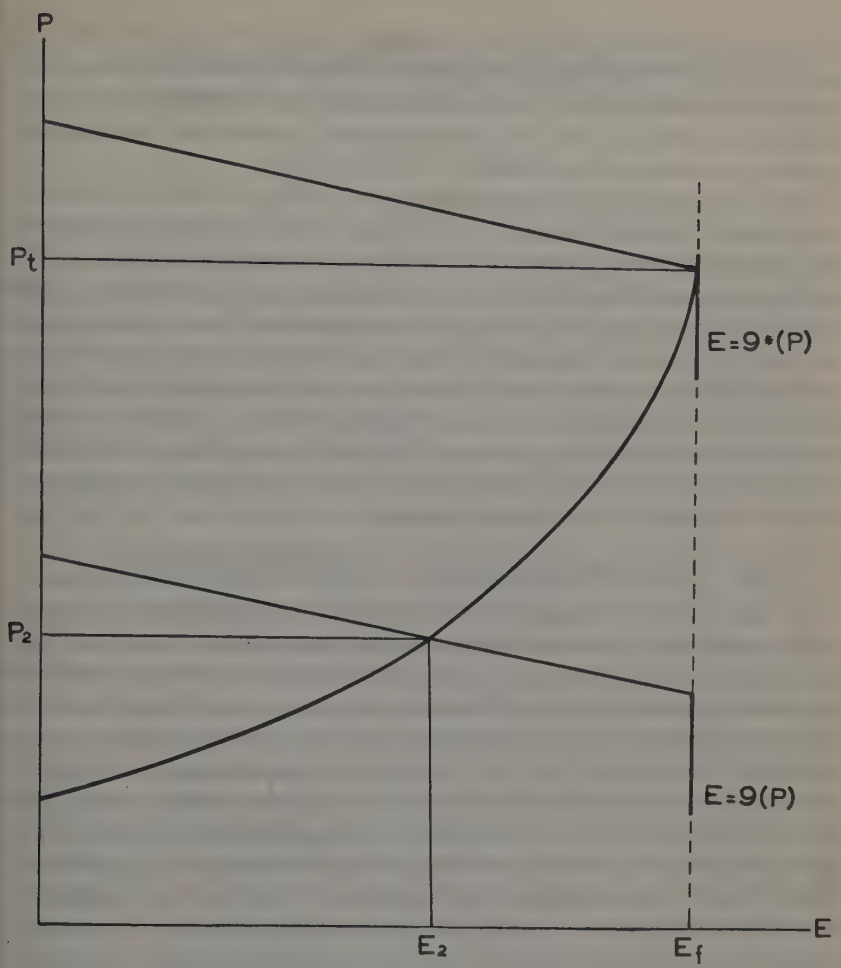

Figure 4

willing to adjust their real-wage and profit-margin demands in the face of rising unemployment and falling sales, the smaller will be the slope of *F (E)*, the smaller the rise in the general price level and unemployment, and the more evenly will the burden of the excise tax be distributed among the various groups. However, the more the union believes that unemployment is a social problem to be solved at the national level by government action, the less willing will it be to reduce its real-wage demand in the face of rising unemployment. On the other hand the more entrepreneurs believe that periodic decreases in sales and employment are inevitable and beyond being influenced by their individual actions, the less willing will they be to change their profit margin as sales

fall off. The more firmly these beliefs are held, the greater will be the slope of $F(E)$ and the greater will be the rise in proces and employment as a result of a given excise tax; and the less evenly will the burden of the tax be distributed among the four groups making up the private sector.

If the government is committed to a policy of full employment, employment will not stay at E_2 (Figure 4). Government measures to restore full employment, such as deficit financing, will shift $g(P)$ upward to position $g^*(P)$ where unemployment is eliminated. The resulting price level will be P_t if the unions and entrepreneurs act to restore their previous real-wage and profit-margin demands as employment and sales rise. In this event the burden of the tax will be borne by bondholders and possibly farmers, depending upon the behavior or relative prices. The total real income of workers and entrepreneurs will now exactly equal the real income they received before the tax was imposed.

III. GENERALIZATIONS AND CONCLUSIONS

If we were to assume that the economy produces many industrial and agricultural commodities instead of just one of each; and that there exists a distribution of entrepreneurs, unions, and agricultural marketing associations with respect to the monopoly power they possess, then we could conclude that the more competitive the economy, the smaller will be the rise in the general price level, and the more evenly will the burden of the tax be spread among the various groups of the economy. In an imperfectly competitive economy the key to the analysis of the incidence of the burdens and benefits of an excise tax lies, just as it does in a perfectly competitive economy [16]), with the changed distribution of income it brings about. The changed distribution of income is a function mainly of the distribution of monopoly power among the various groups and secondly of the production and preference functions of the community, the structure of asset holdings of the community, and the government tax and expenditure policy. The more competitive the economy the closer will be our results of this paper to those found in a perfectly competitive economy [17]).

The greater the monopoly power of a given group relative to the rest of the economy, the less will the real income of this group suffer as a result of an excise tax; the greater the monopoly power of *all* groups in the economy, the greater will be the inflation engendered by the excise tax.

[16]) Cf. Paul Wells, "A General Equilibrium Analysis of Excise Tax Incidence", *American Economic Review*, June 1955, 345-59.

[17]) Op. Cit., 357-59.

L'INCIDENCE DES DROITS D'ACCISE DANS UNE ECONOMIE IMPARFAITEMENT CONCURRENTIELLE

par PAUL WELLS

RÉSUMÉ

Cet article contient une analyse globale de l'incidence des droits d'accise dans une économie fermée imparfaitement concurrentielle. Afin de tenir compte du fait qu'il existe un pouvoir de monopole, il a été nécessaire d'abandonner la méthode d'analyse basée sur l'équilibre général, que de précédents auteurs ont employée et d'utiliser à sa place un modèle d'équilibre global du type keynésien. Pour y parvenir, on développe, dans la première partie du présent article, le modèle théorique d'une telle économie. La deuxième partie applique ce modèle au problème qui se pose et la troisième partie contient une généralisation de l'argumentation.

Le modèle global employé comprend deux relations entre le niveau général des prix et le volume de l'emploi. Ces relations sont une fonction „déterminant d'emploi" et une fonction déterminant le niveau des prix. La deuxième fonction attribue une valeur particulière du niveau général des prix à chaque valeur d'emploi. Cette fonction établit que le niveau général des prix est déterminé par la demande de biens, laquelle, à son tour, est liée, comme nous l'apprend l'analyse du revenu national, au niveau de l'emploi.

Les principales conclusions auxquelles aboutit cet article sont que, dans une économie imparfaitement concurrentielle, la clef de l'analyse de l'incidence du poids et des bénéfices d'un droit d'accise se trouve — tout comme dans une économie parfaitement concurrentielle — dans la répartition différente de revenu que ce droit entraîne. La répartition différente de revenu effectuée par un droit d'accise est principalement fonction de la répartition du pouvoir de monopole parmi les divers groupes économiques de la société et secondairement des fonctions de production et de préférence de la communauté, de la structure des avoirs en biens de la communauté et de la politique fiscale et budgétaire du gouvernement. Plus une économie est concurrentielle, plus les conclusions de cet article se rapprochent de celles que fournit une économie parfaitement concurrentielle. Plus est important le pouvoir de monopole d'un groupe donné relativement au reste de l'économie, moins le revenu réel de ce groupe souffrira de la conséquence d'un droit d'accise, plus sera grand le pouvoir de monopole de tous les groupes de l'économie, plus sera forte l'inflation engendrée par un droit d'accise.

INVESTMENT INCENTIVE AND INCOME TAX [1])

by J. PUTHUCHEARY

Singapore.

The disincentive effect of income tax on investment is an important part of all thinking on taxation. It is true that a large number of qualifications have been introduced since the theoretical basis of the disincentive effect was first postulated by Ricardo, but the basic concept in its essentials has remained unchallenged. Current theories of taxation incorporate the disincentive theory, but to make it consistent with its observable contradiction, include the qualification that the disincentive effect is only operative 'after a point'. Even where it is accepted that there is no evidence of 'penal or confiscatory' tax rates having affected the incentive to invest, the disincentive concept is not rejected, but retained as probable though unascertainable. [2])

Within the limited knowledge that we have of the workings of an investor's mind, economists have suggested two types of models for analytical study — the profit maximization model and Shackle's

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[1]) I wish to express my gratitude to Professor Shackle of the University of Liverpool for his generous encouragement and advice, to Professor Silcock of the University of Malaya for his valuable comments and assistance, to Mr. A. Schooling for all help in preparing this paper and most of all Miss M. Scharenguivel without whose encouragement this work would never have been undertaken and without whose assistance it could not have been completed.

(This article was written while Mr. Puthucheary was detained under the Singapore Emergency Regulations and all the research was done on materials brought to the Prison Camp, by his friends, with the consent of the prison authorities. - T. H. Silcock.)

[2]) A study of the annual investment flow in the United Kingdom during the periods 1924-9 and 1949-54 has shown that there has been no decline in the Gross Investment as a percentage of Gross National Income at Factor Price. Gross Home Investment and Gross Fixed Investment have also been steady during the periods. The figures for 1907, a pre-tax year, showed Gross Investment as 17.8 % which was similar to the figures for 1924-9 and 1949-54. Gross Home and Fixed Investments in 1907 were 11.5 % a figure lower than the other years compared. But this may have been due to large foreign investment that year.

Private investment as a ratio of private incomes has also been steady during the period. If adjustment is made to the 1907 figures by the inclusion of foreign investment the figures are similar to those for the years 1924-9 and 1949-54.

Focus Outcome model. The profit maximization model relates profit expectation and 'costs' in their final form while the Focus Outcome model goes some way in uncovering the formulation of expectations and their relationship.

In order to find out whether the basis of the theory of the disincentive effect of taxes on investments is sustainable or not, we will have to examine whether decisions made under the assumptions of these models are changed by the inclusion of tax liability calculations. The term 'tax' includes all direct taxes on income, that is, income tax, surtax, excess profit tax and levies, profit taxes, etc.

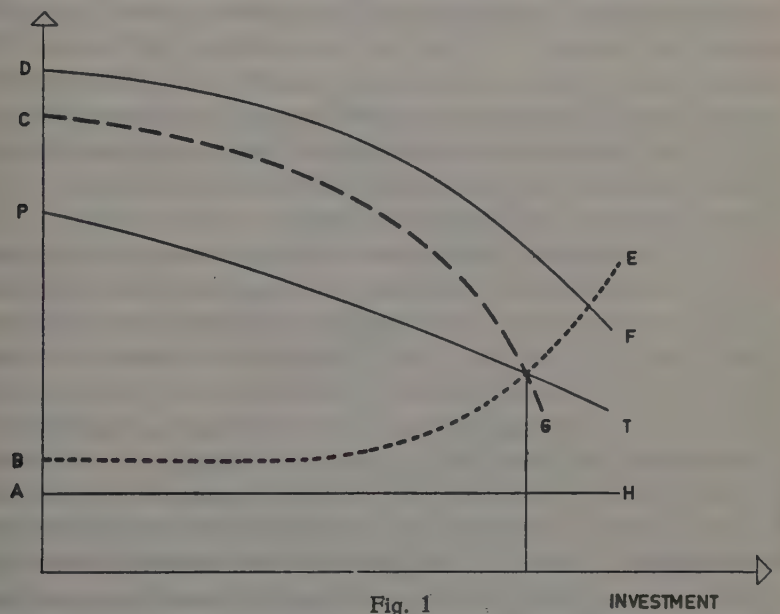

Fig. 1

DF = Marginal expected profits.
CG = Marginal profits less borrower's risks.
PT = CG less taxes.
BE = Interest plus lender's risks.
AH = Long term interest rate.

The profit maximization model used by F. A. Burchardt in his essay *"The Causes of Unemployment"* [3]) incorporates most of the essential factors that go into decision-making. The general structure of the model is that an entrepreneur in making his decision about an investment is guided by a marginal profit expectation curve, which is generally forward falling. He deducts from this curve his

[3]) Economics of Full Employment. Oxford University Institute of Statistics, 1948.

estimates of risk and derives the final expectations, or the expectations which are held with highest confidence. This curve is termed 'profit expectation less borrower risks.' The limit to which he will invest, guided by this curve, is determined by an 'interest rates plus lender risks curve' that is, the price at which the capital to be invested will be available or financial costs. The financial cost curve is assumed to be forward rising and the intersection of the two curves gives the point at which net profits will be maximized for the investment opportunity under consideration.

In the diagram given above area CIB gives the net profits expected with the highest confidence or the amount on which he would expect to pay taxes.

Under a progressive tax structure the rates for different parts of the income differ, but no part will be taxed at a rate equal to 100 %. If we were to plot the values of profit expectations less borrower's risk less tax on net profits expected, we will get a curve PT which will pass through the intersection I.

Let the differences between curve CG and curve BE, that is, values of net expected profits be a_1, a_2, a_3, ..., a_n where a_n at the intersection is zero, and corresponding values of curve BE or financial cost be x_1, x_2, x_3, ..., x_n. After deducting taxes on values a_1, a_2, a_3, ... the values of curve PT will be $x_1 + a_1 (1 - t_1)$, $x_2 + a_2 (1 - t_2)$, $x_3 + a_3 (1 - t_3)$ ... x_n. All these values are more than the values of x and less than $a_1 + x_1$, $a_2 + x_2$, $a_3 + x_3$ ... The only common value of the three curves CG, PT and BE is the value x_n or they have a common point of intersection I. At all other points the curve PT will lie between the curves CG and BE.

Consequently, under the assumptions of this model it is evident that as long as the rates of tax lie between zero and one, the optimum size of investment will remain unchanged.

Before discussing the inadequacies of this analysis, it may be useful to examine whether a progressive tax structure will affect adversely the choice between investments.

When there is a choice between two investments, according to the assumptions of the profit maximization model, the entrepreneur will choose the investment which has the largest net profit expectations, that is, the largest area CIB. The question is whether estimates of profits from investments with different degrees of risk are directly comparable or not. The process of deducting borrower's risks from expected profits makes the residues comparable, as these

estimates have, for the individual making them, equal credibility. The estimates, after the deductions of borrower's risks, will be treated by him with the same degree of confidence and so are directly comparable.

It is quite possible that these rates of risk deductions are different from those that will be used if the investments were being considered in isolation. This is because the rates now express not only the estimates of risk relating to a particular investment project but also express this risk in comparison with the risk in comparison with the risks of the other project. It in fact expresses estimates of comparative risks. When we talk of rates it is possible to say that $(1 - r)$ is the 'coefficient of confidence' where (r) is the rate at which borrower's risk is estimated.

By treating the borrower's risk concept as a rate, it is not suggested that the entrepreneur makes his deductions in terms of some ratio. It is more probable that he works out this value as an amount to be lopped off. But as these lump sums express a unique relationship between the degree of risk involved and the amount expected, it can be treated for analytical purposes as a rate.

The position that an entrepreneur faces can be stated as follows. He has to choose between investment A and B. The profit expected for investment A is equal to $a + b + c$ and that for B is $a + b$. The co-efficients of confidence are $(1 - r)$ and $(1 - r_1)$ respectively where $(1 - r_1) > (1 - r)$, and the financial costs are (e) and (f) respectively. Investment A will be preferred to investment B if $[(a + b + c)(1 - r) - e] > [(a + b)(1 - r_1) - f]$. If the net expectations for investment A is greater than that for B, then the introduction of tax liability will not change the preference for A, though the difference between the profit expectations from the investments will be narrowed.

Under the assumptions of the profit maximization model neither the size of investments nor choice between them is affected by taxation. The financial cost curve determines the profit expectations necessary before investment can take place. As taxes do not push profit expectation to the level of the financial cost curve or below it cessation of investment is not induced. In short a theoretical basis for the disincentive effect of taxation does not exist.

The advantage of the profit maximization model is its simplicity. The factors that go into decision making are stated in terms that are more or less approximate to those in which we expect entre-

preneurs to think. The assumptions of infinite divisibility of investments and the treating of capital as borrowed can be dropped without making material difference to the conclusions reached.

The inadequacy of the profit maximization model, as pointed out forcibly by Prof. Shackle lies in its disregard of loss considerations. Uncertainty in the profit maximization model appears to be one of the extent of profits and not one of the possibility of incurring losses.

"When the outcomes of alternative ventures are uncertain, (that is, are felt by the particular individual to be unknown to him) we can no longer say that the enterpriser will seek to 'maximize profit.' A civil servant might perhaps amend the proposition by saying that the enterpriser will seek to maximize profits 'having regard to the possible loss'. But this makes all the difference in the world." [4])

The profit maximization model is inadequate for analytical purposes, where loss possibilities exist. But for other situations it is not materially different from the final formulation of Shackle's Focus Outcome model, if we treat the 'co-efficient of confidence' as the rate at which 'primary focus gain' is transformed into 'standardized focus gain'. It becomes in fact a special case of the Focus Outcome model where the encumbrance of the indifference curve map has been replaced by marginal curves.

The profit maximization model may have greater applicability than allowed for it by Prof. Shackle and a very large number of investment decisions may in fact be made in the manner suggested by Shackle's clever civil servant. Greater use for the profit maximization model can be claimed if it can be shown that loss considerations need not manifest themselves in values large enough to be included explicitly in calculations even when the possible losses are large. Putting the position in the terms of the Focus Outcome model, the standardized value of a large primary focus loss with a high degree of potential surprise, may be so small that it can be excluded from calculations altogether.

Loss considerations take their particular kind of emphasis in Shackle's analysis because of the shape attributed by him to the Y-curve (the potential surprise curve). The entrepreneur has an inner range of hypotheses regarding the possible outcomes of an

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[4]) G. L. S. Shackle: *Uncertainty in Economics and Other Reflections*, Cambridge University Press, 1955, Page 90.

investment project all of which carry zero degree potential surprise. This inner range consists of a large number of hypotheses some of which are gains and others losses.

The bell shape of the Y-curve and the breadth of the inner range are derived from the assumption that the hypotheses are *independent* of each other. [5]) If the hypotheses are independent of each other, then some of the gain hypotheses and loss hypotheses can carry zero degree potential surprise and theoretically at least, the inner range of gains and losses straddled across x_n the neutral value can extend to a considerable distance on both sides of it. It is questionable whether the mutually independent character of hypotheses regarding the same object, by the same man, at the 'same time' is valid. One would normally assume that as the hypotheses are by the same man, relating to the same object and formulated in a limited space of time, they will be interrelated, or related to a central hypothesis, which we will term the *'primary hypothesis'*.

The related nature of hypotheses on a subject in a limited period of time, can be deduced if we agree that hypotheses have a pattern and are the result of some ordering of the various factors that go into their formulation: that hypotheses are not the results of unrestricted forays into the unknown but the result of the correlating of information and anticipations and even informed guesses. The first thing that we can say about rational hypotheses regarding outcome in the future is, that they are founded on the knowledge and experience of the individual concerned and formulated 'in the light of some known laws, otherwise they will not be sensible or intelligible.' The mind selects and integrates information and anticipations according to patterns accepted as valid in the light of its knowledge and experience. Given a mass of 'data' there would in the first instance be a grading process by which degrees of credibility of each member datum, and its significance to the problem at hand, is assessed. The degree of credibility attached to one set is related to the degree attached to others which it supports or contradicts.

"The subjective credence attached to a proposition is only partly determined by the probability of the proposition and the probability of the proposition is a complex relationship to a mass of other

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[5]) G. L. S. Shackle: Op cit, Page 9.

propositions." [6]) This essential process may not exist in the formal and mechanistic manner suggested. But it must exist in some form or other in the process we call thinking. Selection, ordering and integrating are essential parts of any thinking process, whether these parts are consciously separate or unconscious and telescoped.

The *primary hypothesis*, the central theme of the thinking on an investment project, is formulated from all the data considered significant and most credible. Secondary hypotheses will be formulated by the inclusion of factors rejected in the formulation of the primary hypothesis and/or by the inclusion of sets referring to factors already included, which were rejected in preference to other sets when formulating the primary hypothesis. Consequently, the primary hypothesis will have the greatest importance to the decision-maker and will have the greatest credibility to him. All the secondary hypotheses are deviations from the primary hypothesis and as such will have less importance and credibility. The primary hypothesis having the greatest credibility will have zero potential surprise and the secondary hypotheses will all have a higher degree of potential surprise, as they postulate outcomes, different from that postulated by the primary hypothesis, and as they were formulated by the inclusion of data rejected in the first instance.

In general terms the more a secondary hypothesis deviates from the primary hypothesis the greater will be the potential surprise associated with it. This proposition would hold good whatever the manner in which the primary hypothesis is formulated. The primary hypothesis may be the result of conscious and careful collection and selection of data as a result of an exhaustive study, and the rational basis of the selection and integration may be apparent or even explicit. Or the primary hypothesis may be the result of 'the funded and assimilated experience of an expert', [7]) the rational basis of which is not readily apparent. Or it could be a guess which has acquired properties of belief and has for the individual concerned

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[6]) G. Patrick Meredith: Methodological considerations in the study of human anticipation (from *Uncertainty and Business Decisions* edited by C. F. Carter, G. P. Meredith and G. L. S. Shackle, Liverpool University Press, first edition 1954, second edition 1957).

[7]) D. J. O'Connor: Uncertainty as a philosophical problem (2) Chapter II of *Uncertainty and Business Decisions* edited by C. F. Carter, G. P. Meredith and G. L. S. Shackle. Liverpool University Press, first edition 1954, second edition 1957.

the same kind of validity as primary hypotheses formulated differently have for those formulating them. They all are in a way manifestations of the quality of mind that is termed 'business acumen'.

As a valid generalization, it is possible to say that it is immaterial how exactly a primary hypothesis is formulated; as long as there is a primary hypothesis or a hypothesis which has the highest degree of credibility all other hypotheses on the same subject formulated in a limited period of time, postulating different outcomes, will have less credibility for the individual concerned. The more they differ, generally the less credibility will they have.

There is a further point, which is probably fundamental to the Focus Outcome model. Under conditions of uncertainty gains and losses are possible outcomes, but can both the possibilities be treated as expected outcomes at one and the same time? Shackle's answers to such a question have not been satisfactory. 'Hope and fear can co-exist in a man's mind' and 'we cannot suppose that thoughts of a venture's possibilities of gain will enable the enterpriser to dismiss ... possibilities of loss.' [8]) Whether possibilities of gains and losses can co-exist is not important, but whether expectations of gains and losses can co-exist is important.

It is necessary first of all to distinguish the importance of the difference between expectations and possibilities. Action or decision is based on expectations rationally founded or otherwise, while possibilites express the uncertainty of the outcome. In situations of uncertainty, it is conceivable that the outcome is so indeterminate that both gains and losses are treated as possibilities. But as long as they are considered possibilities, the situation is one of indecision. Decision can only take place when one of the possibilities is transformed into an expectation.

That is, the outcome must not only be considered possible but must also be believed to be likely. The importance of likelihood in inducing investment has been pointed out by Prof. Shackle [9]). It

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[8]) G. L. S. Shackle: *Expectation in Economics*, Cambridge University Press, second edition, 1952, Page 42.

[9]) G. L. S. Shackle: The Nature of the Inducement to Invest. *Review of Economic Studies* 1940. Page 46.

He has also suggested that where the choice is not induced by 'what we ordinarily call 'likelihood' it would be 'to enjoy by anticipation the largest series which he sees no reason to disbelieve in'. Whether this motivation exists or not,

is this element of belief in the likelihood of a possibility that makes is an expectation.

Where an investment has been decided upon, the position is seldom, if ever, stated by entrepreneurs as 'Profits and losses are possibilities!' But whatever the situation, it is inconceivable that the statement would be in the form 'I expect profits and losses'. Such a sentence has no meaning. Two opposite expectations cannot co-exist. Where *profits* are expected, losses can only be possibilities and where *losses* are expected, profits can only be possibilities.

This I think is true of even situations where both gain and loss foci carry the same degree of potential surprise. Prof. Shackle has reduced investment decisions to what he calls 'the simplicity of an ordinary bet' and betting situations provide illustrations of this distinction between the foci even when there is no difference in the potential surprise.

The potential surprise associated with 'heads' or 'tails' resulting from the toss of a coin, or the appearance or non-appearance of a card in a card game is nil. In situations like these considerable betting takes place. It may be said that decision to act results from the attractiveness of the rewards as compared with the stakes. That is, if the value of the gains is greater than that of the stakes, net attraction would rest with the gains in spite of the chances being even (i.e. potential surprise of gain or loss being the same). But betting also takes place where the chances are even and the value of the stakes and gains the same. If there is no qualitative difference between the loss situation and gain situation the individual should remain in a state of indecision.

It is not sufficient to say that the individual acts because of optimism. It is necessary to find out what optimism or even 'gambling instinct' and the like do to focus values. Surely it would be difficult to suggest that optimism and the like change the potential surprise estimates or change the values of the gain and loss subjectively. What probably happens is that one of the outcomes is transmuted into an 'expectation' and the other into a 'possibility'. Where the focus gain is transmuted into an 'expectation' betting takes place and where loss is transmuted into an 'expectation' betting does not take place. I think it would be correct to say that

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anticipation of enjoyment, the prime motive of investment, involves the existence of likelihood in the possibility or expectation.

the distinction between an expectation and a possibility is due to the psychological attitude to the focus outcomes. This psychological attitude is generally based on the difference in degree of potential surprise associated with focus values but not necessarily so.

The term 'transmuted' is not intended to convey the idea that the distinction between expectation and possibility is a secondary process; something extraneous to the original hypotheses. The distinction is a part of the hypotheses and I think it would be correct to say that where the primary hypothesis postulates a gain outcome, it would be an investment from which gains are expected and losses are possibilities. The secondary hypotheses on the gain side will help to determine the final value of the gain on which the expectation of the entrepreneur will be focused. Consequently, the primary hypothesis helps to determine the general shape of the Y-curve and which of the focus values is the expectation.

We can, I think, postulate two characteristics of the value which would be the expectation. Normally the focus value which is the expectation would be a value in close proximity of the value postulated by the primary hypothesis. It is certain, that other than in exceptional cases where the degree of potential surprise for the two focus outcomes is the same, the expectation will have a smaller degree of potential surprise than that of the possibility. Though of the two focus outcomes the potential surprise of an expectation will be nearer zero, it need not necessarily be the hypothesis with potential surprise nearest to zero.

If the discussion up to this point is valid, then two changes must be made to Shackle's model. First the general shape of the Y-curve must be changed. Secondly the gambler's indifference curve map must be re-drawn with the curves having gentle slopes and in same cases being almost flat at least in some sections of the curve.

On the assumption that there is a primary hypothesis and all secondary hypotheses are related to it, it seems legitimate to suggest that the shape of the Y-curve would be more like a wedge than a bell.

In suggesting a smooth and continuous Y-curve, whatever the shape, it is not suggested that there is a continuity of hypotheses. This continuity of hypotheses is at best a diagrammatic fiction. From what we know of hypotheses it would be more correct to assume that hypotheses are generally a discontinuous series. Prof. Carter has suggested that as thinking generally tends to be in

broad groups it may be better to draw the Y-curve in the shape of a staircase [10]) or two staircases facing each other.

Probably the whole Focus Outcome model may be illustrated by an analogy to electric wiring. Let us say that these $\emptyset$ = constant curves are wires carrying positive current and the Y-curve is wire of a different material carrying negative current to which florescent tubes (hypotheses) are attached at irregular intervals. The florescent tubes at the points where the two wires are tangential would light up. From this analogy it will be seen that there are two elements that have to be diagrammatically represented. One is the inter-connection between the hypotheses or some 'continuity' relationship and the other the discontinuous nature of the individual hypotheses. Diagrammatically we may thus have an underlying wedge pattern of some sort which has large irregular details and may probably be somethinkg like that shown in the diagram below. The smooth Y-curve is derived by joining the highest values of each broad group.

The problem of drawing the Y-curve is mainly one of the diagrammatic limitations and not one of conceptual difficulties regarding either the nature of hypotheses or their inter-relationship.

The actual shape of the curve is unimportant. Its general characteristics are that the apex of the curve (zero potential surprise) would be at some point away from the neutral value x_n. The further away the apex is situated, the stronger the general tendency will be for the value of primary focus loss to be smaller and the degree of potential surprise to be higher. That is the greater the gain postulated by the primary hypothesis, normally the smaller will be the focus loss and the higher the surprise associated with it. This assumes that where considerable primary gain is postulated, the hypothesis postulating loss would have to incorporate factors or sets which deviate greatly from those that were included in the formulation of the primary hypothesis and consequently will have higher degrees of potential surprise associated with them. There may be cases where a small change in some of the factors could result in large losses and as such the loss hypothesis will not be associated with high degrees of potential surprise. But it is unlikely to be the case generally.

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[10]) C. F. Carter: A Revised Theory of Expectations. (From *Uncertainty and Business Decisions* edited by C. F. Carter, G. P. Meredith and G. L. S. Shackle). Liverpool University Press, first edition 1954, second edition 1957, Page 55.

When the wedge shaped Y-curve is transposed on the Ø = constant curve map the standardized focus loss would tend to be small even where some of the hypotheses postulate very large loss possibilities. The standardized values of these primary focus values would tend to be small as they would tend to be associated with high degrees of potential surprise. Some of these values would be so small that they will fall into the 'valley of oblivion' reserved

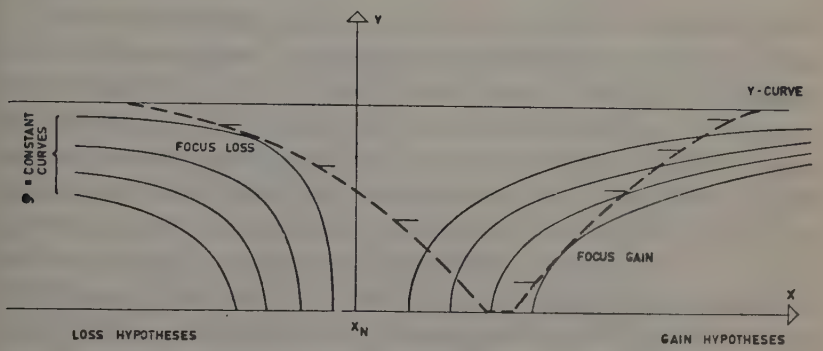

Fig. 2

for small and uninteresting values. In such cases, and the extent could be large in view of the shape of the Y-curve, the profit maximization model will be applicable and what an entrepreneur does is what has been well summarized by the clever civil servant. 'The entrepreneur will seek to maximize profits having regard to possible loss'.

The shape of the Y-curve reduces the importance of losses and in some cases would eliminate it as an effective consideration. But significant loss possibilities would continue to exist. Where they continue to exist the indifference curve map is necessary for understanding their relationship in decision making.

The second consequence for the concept of the primary hypothesis is the distinction between expectations and possibilities. In general terms a unit of expectation would have greater impact than a unit of possibility. It also seems legitimate to assume that where values of expectations are great, i.e. where large profits are expected, values of possibilities, i.e. loss possibilities, will have smaller influence on the mind of the decision maker than when associated

with small values of expectations. On the other hand where loss possibilities are large and tend to swallow up the total fortune of the individual, they will exert increasing influence.

These assumptions translated into curves will given an indifference curve map which is something of the nature given below.

The OS curve, 'the origin indifference curve' or the 'action-inaction' curve will lie for most of its length if not all, well below the

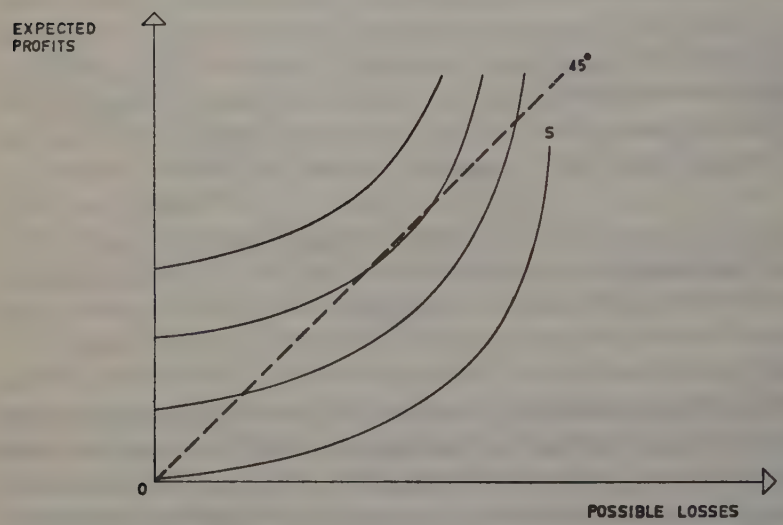

Fig. 3

45° line. It will be the sharpest slope of all the curves. The general shape of the other curves will be:

1. $\frac{dy}{dx}$ positive < 1 generally, rising to > 1 in remote regions.
2. As we shift to curves with successively larger Y-intercept, the positive slope decreases and tends to 0 for some values of X.

Within the adjusted Focus Outcome model what are the effects

of the inclusion of tax liability calculations on investment decisions? In the first instance it reduces focus gains and focus losses.

It is doubtful whether an entrepreneur would work out the tax liabilities for each one of his hypotheses and derive a new Y-curve. It is more probable that he would work the tax liabilities of the focus outcome values, and adjust these values to possible tax payments. Focus loss can only be adjusted if he has income from other sources. We will assume that this income exists and call it 'original income'.

The amount by which primary focus gain will be adjusted would be a simple calculation but loss adjustments will equal the reduction of tax payment on the original income due to the incurring of this loss. If income in the event of profit or loss remains in the same tax bracket the focus gain and focus loss will be reduced in the same proportion. But if gain would move the income into a higher bracket or loss would move it to a lower income bracket, focus gains will be reduced at a higher rate than focus losses.

Whatever the sums — the reductions from focus gains and focus losses — these sums will be reduced from the primary values. Prof. Shackle has suggested that the $\varnothing$ = constant curves would have decreasing concavity as they move away from x_n, the neutral value. In that case the standardized values will be reduced by less than the full amount of the tax liability. The further away the primary focus value is from the neutral value x_n, the greater will be part of the tax liability that is not passed on to the standardized value. Further, the higher the degree of potential surprise associated with a focus value, the less of the tax liability will be passed on to the standardized values.

In a situation where an entrepreneur has to make a choice between two investment opportunities A and B with primary focus gains (a) and (b) where $a > b$, the effect of tax liabilities on standardized values will be as follows. Primary focus gain (a) will be reduced by (at) the amount of tax but standardized value $a_s - at_s > a_s - at$, and that of focus gain (b) will be reduced by (bt^1) but standardized value $b_s - bt^1_s > b_s - bt^1$. As (b) stands on a lower $\varnothing$ = constant curve than (a) more of (bt^1) will be passed on to $b_s - bt^1_s$ than of (at) is passed on to $a_s - at_s$. That is, a part of the narrowing resulting from taxation will be offset by the difference in the absorption of tax liability into the standardized values. It is needless to say that the narrowing process is vastly

greater than the offsetting process. Where there is original income loss is also adjusted by a similar process.

Let us assume that after plotting the pre-tax values of focus outcomes it was found that investment A was on a higher indifference curve than investment B. The focus gains of investments A and B are (a) and (b) where a>b and focus losses (c) and (d) where c>d. Investment A occupies a higher indifference curve because a — b is greater than the amount necessary to keep investment B on the curve it occupies while (d) is being made equal to (c). Let us term the amount needed to keep an investment on its indifference curve while its loss possibility is being made equal to the loss possibility of another, the 'loss equalization margin.'

After tax liability adjustment, investment A will be on a higher indifference curve if the adjusted values $a_1 - b_1$ is greater than the new loss equalization margin for investment B. Where tax adjustment narrows the difference between the two focus losses, the new 'loss equalization margin' will be smaller. Some of this effect will be offset by B moving to a lower indifference curve which will have a steeper slope than the one vacated. But where there is no loss adjustment the loss equalization margin will increase.

Under the assumptions that were made earlier the standardized focus losses are unlikely to constitute a large proportion of the focus gains, and because of the slope ascribed to the indifference curves it is unlikely that the loss equalization margins are large. Though it is not possible to say anything categorical about the disincentive effect of taxation, it seems unlikely that taxes would reverse the relative attractiveness of investments.

On the question whether tax liability calculations would lead to cessation of investment, the position in the Focus Outcome model is that investments which are pushed below the origin indifference curve will not be made. That is investments on the margin, if affected by taxation will go under. But marginal investments in this case mean investments with profit expectations which are smaller, even very much smaller than loss possibilities. It is doubtful whether such investments are ever of any significance to the considerations of entrepreneurs.

Prof. Shackle's inference that 'many ventures that enterprisers have in mind at any time, whose standardized focus gains are thus reduced (by taxation) will be moved from an indifference curve lying above and to the left of the origin indifference curve to one

lying below and to the right of it [11]) rests on the assumption that the origin indifference curve lies on and above the 45° degree line. This assumption connot be sustained if the contention that there is a difference in the quality of focus gains and focus losses is accepted. There may however be investments where large profits expectations are associated with large loss possibilities, investments in new industries or new areas. These investments would lie on the outer edge of the indifference curves map in the region where the curves are rising at a rate greater than 1. As the margin between curves and the origin indifference curve may not be very great, a very heavy tax may move the position of the investment to a point below the OS curve. And such investments will not take place.

The conclusion that we can arrive at when analysing with the help of the profit maximization model has to be amended. Where losses are not significant considerations, there is no theoretical justification for maintaining that income tax has a disincentive effect on investments. Where losses are significant considerations, it is possible but unlikely that disincentive effect exists.

The opposition to taxes lies mainly outside economic justifications. Consequently the limit of tax structure is set by the point at which investors will cease to accept a given tax structure as one of the conditions under which investments have to be made, and 'revolt' against it. Progressive tax structures probably have the advantage that they take away the moral justification for such a revolt from the owners of capital, and allow the taxing authority to arrogate the moral rights, as it does by placing heaviest tax burden on those who can best afford it.

The acceptance of the world's heaviest tax structure as one of the inescapable conditions under which investments have to be made is probably best stated by the Royal Commission on the Taxation of Profits and Salaries in its Second Report. "The combined rates of income tax and surtax attain in the case of higher incomes [a level] variously described as penal, confiscatory and very heavy... such rates are criticised as tending to repress effort and to discourage the taking of risks. Probably they do to same though unascertainable extent ... we see no evidence that higher income earners are specially affected by disincentive." (Sec. 148-149)

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11) G. L. S. Shackle: *Expectation in Economics*, Cambridge University Press, first edition, 1949, second edition 1952, Page 95.

L'INCITATION A INVESTIR ET L'IMPOT SUR LE REVENU

par J. PUTHUCHEARY

RÉSUMÉ

On admet couramment qu'un impôt sur le revenu pourrait être assez élevé pour décourager l'investissement ou pour amener les détenteurs de fonds à choisir les entreprises qui leur sembleraient moins hasardeuses. L'étude de ce choix peut se faire d'après deux modèles. Le modèle qui se réfère à la maximisation du profit établit que pour toute échelle d'investissement dans un projet donné l'entrepreneur devra se rappeler l'unique nombre représentant le profit marginal que ferait gagner une faible montée dans cette échelle. De ce nombre, il retranche une somme représentant ses propres risques et une autre somme pour l'ensemble des intérêts et des risques du prêteur. C'est sur le reste après ces deux soustractions que l'impôt doit s'appliquer et quel que soit le taux de cet impôt, son rendement effectif pour un profit marginal nul sera nul. Mais c'est précisément si le profit marginal est zéro que l'échelle de l'investissement devra produire le profit total maximum. Puisque l'impôt ne déplacera pas le point du profit marginal nul, il n'affectera pas l'échelle d'investissement choisie. Par extension de cette analyse, on démontre qu'un impôt ne pèsera pas sur le choix entre divers projets.

Quoi qu'il en soit, le modèle de maximisation du profit ignore la possibilité pour un investissement de se traduire par une perte. L'incertitude dans le sens d'ignorance avouée du résultat d'un projet en ce qu'il donnera un profit ou une perte et de quelle valeur dans chaque cas peut être analysée au moyen du „Focus Outcome model" de Shackle. Il y est admis que la décision de l'entrepreneur n'est pas attirée par quelque construction logique provenant de données disponibles vers telle ou telle série de résultats dont le nombre est forcément grand. C'est pour cela que des possibilités de perte tiennent une grande place dans l'analyse faite d'après ce modèle. Par contraste, l'auteur pense qu'une telle construction logique qu'il nomme *hypothèse primaire* occupera la pensée de l'entrepreneur et

que des résultats différents de celui qui a été ainsi désigné comporteront une surprise latente qui croîtra avec la distance qui les en sépare. La courbe de la surprise en puissance ainsi envisagée est en forme d'angle contrastant avec la courbe arrondie décrite par Shackle.

Cette idée différente de la nature et des bases de la courbe de surprise conduit l'auteur à une vue également différente des deux „focus outcomes". Il n'y a aucun sens, dit-il, à dire que le preneur de décision „attend" profit et perte de chaque entreprise. A tout le moins, aussi longtemps que ces deux résultats opposés se tiennent dans son esprit sur un pied d'égalité, il est encore indécis. La décision se produira quand l'une de ces hypothèses aura été reléguée au rang de simple possibilité, l'autre devenant une prévision.

Quand l'hypothèse primaire laisse espérer un profit positif comme la „prévision", la courbe de surprise latente (en forme d'angle) aura son sommet sur la ligne positive de la variable du résultat et ainsi l'autre „focus outcome" qui indique une perte comportera une surprise potentielle très haute et son équivalent standardisé (une perte numériquement plus faible entraînant une surprise potentielle zéro) représentera alors une perte négligeable. Nous nous retrouvons ainsi dans la possibilité, sans trop de distorsion, d'employer l'autre modèle, celui de la franche maximisation d'une fonction de profit à valeur unique. On conclut de nouveau par conséquent qu'un impôt sur le revenu aura peu d'effet décourageant sur l'investissement ou peu d'influence sur le choix entre des projets d'investissement.

TAXATION IN SOUTH VIET-NAM

by RICHARD W. LINDHOLM

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In South Viet-Nam the American military and economic aid programs are in intimate contact with the government administrative and economic institutional framework which the French leave behind in their colonial areas. [1]) Because of this, and also as the result of the creation of the new nations in North Africa, what has been encountered in the fiscal area in President Ngo Dinh Diem's Viet-Nam transcends the importance of a purely Vietnamese or a South East Asian tax situation; it is a case study of the adaptability of a French type tax system and French trained tax officials in meeting the problems of a new nation. [2])

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[1]) South Viet-Nam is the name of international postal usage for the portion of Viet-Nam south of the 17th parallel. This area consists of three former administrative regions; south Viet-Nam, central Viet-Nam, and the plateau area. The population of this area as given in the *Annuiaire Statistique du Viet-Nam,* 1956, pp. 36-43 was 12,261,000 in 1955. The per capita income at the official rate of exchange was $ 144 in 1955. *Bulletin Economique de la Banque National du Viet-Nam,* No. 2, 1956, p. 24.

[2]) National tax legislation in effect up to 1957 amendments is included in four publications prepared by the Ministers des Finances des Plan et de la Reconstruction published in Saigon, Viet-Nam, on April 1, 1953. The 1957 amendments are available in a mimeographed translation dated March 1957. This was prepared by the economic section of the Viet-Nam National Institute of Administration, Saigon, South Viet-Nam.

South Viet-Nam's new constitution of 1956 does not contain detailed provisions relative to taxation. In an analysis of this constitution, J. A. C. Grant in "The Viet-Nam Constitution of 1956' *(American Political Science Review,* June, 1958, pp. 437-462) fails to mention any fiscal provisions.

The two articles concerned with finance are articles 43 and 61. Article 43 provides for the presentation of the budget by the President. The term is obviously used to include both revenue sources and expenditures. Article 61 states, "Deputies have the right to initiate expenditures but at the same time they shall propose corresponding new receipts." (The Constitution of the Republic of Viet-Nam, Saigon, The Secretariat of State for Information, October 26, 1956, pp. 30, 33.) Apparently the assumption of the framers of the constitution was that the executive will exercise greater fiscal responsibility than the assembly. Also it seems to limit the assembly tax powers to the initiation of new taxes to cover the cost of new legislative enactments.

This justification for the analysis of the tax system of a new nation is really not needed as *rainson d'êre,* for today the problem of developing ways for new nations to become fiscally viable has gained a high priority on the list of worthwile areas of fiscal research.

The taxes of South Viet-Nam are closely modeled after the French tax system of about forty years ago. The name of the tax, the tax base, and the tax rates are often indentical with those at present or formerly in use in France. [3])

However, in the past these taxes were largely collected from the French community and were not generally applied to the Vietnamese and Chinese residents. The taxes collected from the indigenous population arose from a partially clandestine opium monopoly and a high developed legal prostitution and gambling industry. Today the French community is much smaller; and opium smoking, gambling, and prostitution are illegal. This has put the French tax system as it has been transplanted to South Viet-Nam to the test. The test is whether this tax system can be used to collect from the nationals of South Viet-Nam the quantities of revenues required to support a government carrying out normal functions and providing some capital for economic development.

This paper is a summary of the tax system of South Viet-Nam, a consideration of the effectiveness of this system under today's

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[3]) The two translations from the Saigon Press, the first the Chinese Press, and the second the Vietnamese Press, decribe typical type of tax problems encountered by new governments.

Viet Hoa, November 20, 1956 — News received from the authorities discloses that after completion of the general census of all foreigners living on the territory of South Viet-Nam, the Vietnamese Government will increase taxes for foreign residents. This step aims at making a difference of payment of taxes between foreigners and Vietnamese.

According to the authorities, the exacting of high taxes from foreigners has been a common practice in other nations. However, foreigners who have obtained Vietnamese citizenship are not required to pay these high taxes.

Tin Dien, December 26, 1956 — Recently an embezzlement of some one million piasters was discovered at the Excise administration service in Cholon, the culprit being the secretary in charge of receipts, Tang Canh Dinh.

Dinh's practice consisted in registering on the receipt book counterfoil only part of the sums paid in fines or taxes, keeping the rest for himself. The theft was discovered when the Finance Inspector discovered some differences between the amounts on the receipts Dinh had delivered to tax payers and the counterfoils.

Dinh and two other secretaries of the service have been arrested and questioned by the Security service.

changed conditions and an analysis of the tax legislation initiated by President Diem's government in 1957.

Customs

The tax revenues of South Viet-Nam are dominated by customs and regie (additional excise tax levied on selected imported and domestic goods). Nearly two thirds of the total customs and regie collections are levied on imports, (some customs collections arise from exports-primarily rubber). This, however, is not all the tax revenues that are collected rather directly from imports. Table I provides an estimate of the total of tax collections directly related to imports. The total is 3,559,185,000 piasters. [4]) In the same year tax collections totaled 5,856,939,000 piasters. Thus in 1955 imports were the base for about 60 per cent of the tax collections of the national government. The tax legislation of 1957 increased tax collections, by some 15 per cent. This development resulted in an increase in the portion of tax collections based on imports. [5])

Table I

TAX REVENUES ARISING DIRECTLY FROM SOUTH VIET-NAM'S IMPORTS, 1955

(000's piasters)

Type of Tax	Amount
Import duties	1,509,961
General interior tax	471,211
Regie on gasoline and kerosene	336,092
2/3 of miscellaneous customs and regie	270,632
3/4 of turnover tax	621,352
½ of patente (business license tax)	109,302
½ of income tax on individual and corporation profits	231,306
Total	3,559,185

An unusual feature of South Viet-Nam's imports and therefore of the fiscal situation of the national government is that about 73

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[4]) The official value of the piaster is 35 to the $ 1 and 10 French francs for 1 piaster. The rate on what might best be described as the official free market is about 70 piasters to the $ 1.

[5]) These reforms are discussed on page 5 and following. About 90 % of total tax collections are national government taxes.

per cent of the imports are financed with American aid.[6]) Also, nearly all [275,673,000 piasters (official rate) are not] the imports into South Viet-Nam have been purchased with foreign exchange acquired at the official rate of exchange. This procedure has meant differently, the present procedure provides a 115 per cent subsidy that imports are purchased at about one half the world price. Put to importers; the importer can purchase for 35 piasters on the official market what on the free market would cost 75 piasters. This underpricing of imports has given the purchasers of imports an immense ability to bear taxes. The collection of high taxes on imports under these circumstances could be considered to be a method of indirectly bringing about a devaluation of the piaster. Despite this unusually favorable situation relative to the real burden of taxation in South Viet-Nam, tax collections were estimated to be 7.5 per cent of gross national product in 1956.[7])

Turnover Taxes

Until March 1957, the second most important source of tax revenues was the turnover tax *(chiffre d'affaire)*. The tax was originally introduced in 1947 at a one per cent rate. Since May 1, 1953, the rate has been four per cent. The additional three per cent tax is called the *surtaxe d'armement*, and the revenues were to be used to support the war effort. Both the *chiffre d'affaire* and the *surtaxe d'armement* were repealed in March, 1957.

The base of the tax was very broad and included services (except professional such as dentist and lawyer services) and all sales of goods except the original sale by the producer of farm products.

The tax was levied on each transaction, making a theoretical tax of 12 to 16 per cent. However, the tax was badly enforced as indicated by the 1955 collections of 929,344,000 piasters. This total is only about 10 per cent of the CIF price of imported goods and perhaps less than 4 per cent of the retail price of imported goods (CIF price plus customs duties plus mark-ups) alone, and much

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[6]) *Balance Générale des Paiements du Viet-Nam en 1955* (Saigon, Viet-Nam, Bangue Nationale due Viet-Nam, 1956), pp. 17-19.

[7]) For a summary of a confidential study I completed of Viet-Nam's tax system see *Summary of Principles and Recommendations Included in R. W. Lindholm's "Analysis of Viet-Nam's Tax System"* prepared for ICA by Henry Tenenbaum, Deputy Chief, USOM Finance Division, Saigon (August 6, 1956).

less than 2 per cent of taxable transactions. [8]) As Table I indicates. about ¾ of the 1955 collections are properly allocated as a tax on imported goods.

Production Tax

The production tax was introduced in 1957 as a replacement for the turnover tax. The new tax was seen to be a procedure of (1) increasing tax collections without increasing the legal tax burden (2) reducing tax evasion and tax personnel corruption temptation (3) making the distribution of the tax burden correspond more closely to ability to pay.

Actually the new production tax provided for the repeal of three taxes: the general interior tax on imports, the general interior tax on local products, and the turnover tax which included the surcharge for armament.

At the high level of imports prevailing in 1956, the interior tax on imports provided about 350,000,000 piasters of revenues. This was somewhat more than a third as much as was collected from the turnover tax and its armament surcharge.

The rates of the general interior tax on imported goods were 4 %, 6 %, and 10 %; depending on the good imported. If the good was a basis for further production the rate was the minimum. If it were a luxury good the rate was likely to be at the maximum. The interior tax on domestically produced goods was unimportant and provided only about 8,000,000 piasters of tax revenues.

Therefore the effect of the production tax, with its rates of 15 %, 25 %, or 35 % on imported goods, was to bring about a somewhat reduced theoretical tax burden on imports of consumption necessities and goods used in further production that were sold through normal distribution channels. It somewhat increased the burden on luxury goods and goods not necessary in carrying out normal economic functions. The tax on goods of domestic production at a rate of 6 % reduces the taxes considerably on goods produced under

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[8]) The Gross National Product of South Viet-Nam was estimated to be 80 billion piasters in 1954. If it is assumed that the amount of GNP arising from consuming one's own production or bartering is equal to the difference between GNP and the transaction total, the rate is 1.2 per cent. The CIF (free market rate) value of imports is, on the basis of this comparison, about 25 per cent of GNP. (Calculated from *Estimations du Revenue National du Viet-Nam en 1954*, Saigon, Viet-Nam, Banque Nationale du Viet-Nam, 1956.)

conditions that make them subject to the tax. Previously these goods marketed through normal trade channels would be theoretically subject to a tax rate of 12 % or 18 % of the processor's sale price.

For those domestic goods exempted from the production tax the reform eliminated the legal tax burden by the full amount of the turnover and armament tax plus the interior tax on domestically produced goods. The production tax base excludes the production of producers

(1) employing less than 6 workers including members of family
(2) using only simple machines that are relatively unimportant in the production process
(3) having annual sales that total less than 500,000 piasters (about $ 14,00 at the official rate of exchange).

Although the goods produced under conditions making them exempt from the production tax make up an unknown but a very substantial portion of the total production of South Viet-Nam, they had not provided an important portion of the actual tax base. In reality, therefore, this exemption did not bring about a substantial narrowing of the tax base which had been available to the turnover tax and the interior tax on domestically produced goods.

The introduction of the production tax has substantially increased revenues and seems very likely to have caused a general improvement in the effectiveness of South Viet-Nam's tax administration. However, the large collections that have been experienced are dependent upon continued large imports, and somewhat upon the continued over-valuation of the piaster. Both of these are in turn closely related to the amount of foreign aid South Viet-Nam receives. The reform failed to make any substantial progress toward shifting the tax system from one based on foreigners and economic activity related to foreigners to a tax system based on the principal economic base of the nationals-agricultural production. [9])

Income Taxes

For practical purposes, the income tax of South Viet-Nam consists of five parts, but the law provides for nine separate *cédulaires,* or

[9]) In mid-1958 Cambodia which as a part of French Indo-China had a tax system identical with that of South Viet-Nam, modified its tax system along the lines adopted in South Viet-Nam in 1957. In Cambodia, however, the turnover tax was continued in a modified form. Under the new legislation the tax is applied only on the first sale of a product.

types of income. (1) The tax upon income other than wage income, which is taxed at 16 per cent if it is the income of an unincorporated business and (2) 24 per cent if it is the income of an incorporated business. Over 90 per cent of the collections of this portion of the income tax arise from assessments on corporate income.

(3) The tax on salary and wage income with a rate from one per cent to five per cent. (4) The general income tax, which is applied to wage and salary income and all other income of natural persons (including distributed corporate profits) with rates from 1 per cent to 50 per cent. This tax is applied in practice to the same base as the income tax on wage and salaries and the other income of natural persons. These four income taxes are administered by the Direction of Direct Taxes which is a part of the General Direction of Taxes. The other important operating division of this General Direction is the Direction of Indirect Taxes.

About 80 per cent of the total collections from these four income taxes arise from the 24-per cent rate which is applied to corporate income. The collections from the income tax on salary and wages was only about 544,230 piasters in 1955 and the collections from the general income tax 83,052,000 piasters. [10])

(5) The last income tax is levied on interest and dividends paid out by corporations and is administered by the Direction of Registration, which is a part of the Department of Finance but is not under the General Direction of Taxation as is the regular corporate income tax. The rate of this tax is 18 per cent on SARL (private) corporations and 24 per cent on SA (public) corporations; three fourths of the collections arise from SARL corporations. The collections from this income tax are slightly less than one half the

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[10]) The very small collections from the income tax on salary and wages arises to a considerable extent from the failure of the Secretary of Finance to use the power he possesses to initiate witholding of income taxes from salaries. This situation forced the tax administration to place the following item in all the principal newspapers of Saigon on January 14, 1957.

The Directorate for Tax asks all public and private offices, individuals and mutual associations to send in before January 31 statements of all payments made during 1956 such as salaries, allowances, bonuses to employees, salaries to members of any board, business commissions, royalties to writers and inventors, retirement funds or pensions.

The statement must be made on forms provided by the Direct Tax service. The response (1956 income year collections) was not great although through other administrative devices it was possible to show some improvement.

collections from the regular corporate income tax and more than twice the total collections from taxes applied to the income of natural persons. In 1955 the total collections from these five income taxes was 744,500,000 piasters, or not quite 13 per cent of the total tax revenues available to the national government. [11])

The four income taxes under the Direction of Direct Taxes are assessed but are not collected by this Direction. The actual collection is carried out by the Treasury which is a part of the Department of Finance but possesses a very independent status and is not controlled in any way by the Direction of Direct Taxes. The tax on distributed earnings and interest paid by corporations is both assessed and collected by Direction of Registration which is also a part of the Department of Finance but is not under the General Direction of Taxes, and therefore quite separate from the Direction of Direct Taxes.

The tax burden on corporate net income is rather high. For example, the net income of a public corporation (SA corporation), distributing all its earnings in dividends and with the dividends being received by stockholders on the average in the 15-per-cent general-income-tax bracket, would bear a 52-per cent tax. The total general income tax collections of 83,098,000 piasters indicate that most of the dividends received do not get included under the general income tax. [12])

Registration

The taxes collected by the Direction of Registration *(droits d'Enregistrement)* are related to property transfers and documents related to property ownership. The collections totaled 589,293,000 piasters in 1955, including the tax on corporate dividend and interest payments referred to above.

The transfer of ownership of real estate property is taxed at 13.2 per cent of the value of the sale if the property has been sold one or more times since 1948 or 18 per cent if the first sale since 1948. The tax rate on automobile sales is 3.6 per cent if under 15 horse-power and 9.0 per cent if over 15 horsepower. [13])

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[11]) South Viet-Nam was originally (1955) divided into three regions. Since 1956 these regional divisions have been gradually eliminated. In 1956, for fiscal purposes, the regions were combined with the national government.

[12]) Data on the composition of the general income tax base show that 21.84 per cent of the taxable base arises from income of securities held.

[13]) European concept of horsepower.

The death taxes of South Viet-Nam produce very little revenue and consist only of an inheritance tax. The tax exempts Vietnamese inheritances under 50,000 piasters and allows 20 per cent of the total estate to be set aside to celebrate death anniversaries. The tax has a different and higher rate structure for French and foreigners than for Vietnamese. The tax rates vary from 2 per cent to 48 per cent of the inheritance.

The stamp tax legislation requires a stamp be attached to every conceivable type of official and legal document. In 1955 the stamp tax on checks was removed. The cost of administering the stamp taxes appears to be about 20 per cent of collections, while in 1955 the average cost of administering all taxes collected by the Direction of Registration was 4.2 per cent.

The insurance tax is a tax on premiums and varies from 3.84 per cent of life insurance premiums to 16.60 per cent of fire insurance premiums.

The registration taxes, particularly those on debt documents, are undoubtedly a burden to commerce. The tax rate on loan contracts is 1.2 per cent of the value of the contract and does not vary with the length of the contract or the rate of interest. Actually the tax is only paid if court action is contemplated.

Special Excise Taxes

The special excise taxes are becoming more productive through increased administrative effort, higher rates and the expansion of the coverage. In all instances these taxes somewhat include the idea of special taxation of luxury consumption, particularly of imported or western type goods. Another element involved in the selection of the goods and services subject to special taxation has been the possibility of effective administration. However, in the case of taxes administered by the general direction of taxation ease of administration does not appear to have been a dominant element.

The special excise taxes are divided into two administrative groupings, those administered by the general direction of taxation and those administered under Regie. This division is one arising from the historical development of tax administration in France and is not particularly based upon administrative desirability or economic usefulness in South Viet-Nam.

Special excise taxes administered by the general direction of taxation are as follows:

Paddy (rice) transformation tax, meat consumption tax, ice consumption tax, entertainment tax, luxury tax on precious metals, luxury tax on consumption in restaurants, gasoline and other petroleum products tax.

The regie taxes are administered through a division of the Customs Service and here ease of administration appears to have been more important. However, the twin concepts of luxury consumption and the consumption of Western type goods continue to be important. Another element which has caused certain products to be taxed under regie has been the former or present manufacture of these products by the French government.

These taxes have been imposed on 13 different commodities. Included are such goods as gasoline, cigarettes, alcohol, (wine), beer, matches, mineral oils, radio tubes, gun powder, fireworks, salt and sugar. About 50 per cent of the collections from taxes administered under regie arise from the tax on cigarettes and approximately another 30 per cent from the tax on gasoline and kerosene. Gasoline is included as a product subject to special taxation under both the Direction of Indirect Taxation and Regie. The revenues in both cases go into the general fund.

Real Estate Taxes

The taxation of real estate is divided into three categories: the taxation of (1) rice land, (2) agricultural land used for other purposes, and (3) urban land and buildings.[14]) In addition to the revenues available to the regions from taxing the first two categories of real estate and now to the National government, the provinces, villages and cities are permitted to add a percentage which varies from 200 per cent of the national tax for urban land in Saigon to 5 per cent additional on rice land for the village budget and 10 per cent additional on rice land for the provincial budget. The tax is administered theoretically by the national government, but because the assessors outside the capital are appointed by local provincial chiefs, the National government's control is very weak beyond the metropolitan area of Saigon. The tax has not been a large revenue

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14) The traditional Chinese type land tax (used in ancient Viet-Nam) possessed a number of features similar to the French system. See "The Land Tax in China" by Han Liang Huang in *Studies in History, Economics and Public Law* (Vol. 80) (New York, Columbia University Press, 1918),

raiser and collections have been less than 1 per cent of total national tax receipts.

The failure of the Vietnamese tax system to collect significant revenues from domestic activities is a basic weakness. [15]) More than likely a successful land tax program is the *conditio sine quo non* for an adequate government revenue system in Viet-Nam.

Patente

The *patente* is a business license tax based on the type of business carried on and the estimate of the rental value of the premises occupied; in addition, selected businesses are taxed on the basis of gross receipts of the previous year. Here again the local governments are permitted to add a given percentage to the basic tax (the amount permitted is 200 per cent, plus 2.5 per cent for the Vietnamese Chamber of Commerce, and if a Chinese business, an additional 15 per cent for the Chinese Chamber of Commerce). The revenues produced by the basic patente rate were formerly available to the regional government, they were transferred to the national government in 1953.

Summary and Conclusions

The tax system of Viet-Nam makes very little use of direct taxes. The income tax produces some revenues, but nearly all are collected from corporations. The real estate tax produces very little revenues outside the Saigon metropolitan area. The taxes on business such as many of those collected by registration and the patente and the former turnover tax were subject to wide abuse because of a faulty base and a rate structure that was not expected to be generally fully applied. The tax system fails to collect significant revenues from basic domestic activities and instead is aimed at the taxation of imports and western type consumption goods, i.e. cigarettes and gasoline, which can be doubtfully labeled luxury goods.

This is a picture of a weak tax system. The ordinary tax revenues in 1955 were down 453,128,000 piasters from the 1954 level. This decrease in revenues took place while prices were rising by approxi-

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[15]) In this respect South Viet-Nam is not alone among the new nations. Between 1938 and 1950 the portion of total taxes arising from taxes assessed upon property decreased in India, Brazil, Egypt, Iran, Syria, and Turkey. See *Comparative Economic Organization* by Arthur Robert Burns (New York, Prentice-Hall, 1955), p. 697.

mately 10 per cent and commercial importers were enjoying a very substantial subsidy. Comparable tax collection data of 1955 and 1956 show a continued downward trend (collections of major national government taxes for the first five months of 1956 were down 10 per cent from 1955) while prices ontinued to rise. The adoption of the production tax in 1957 plus other additional taxes on luxury goods and gasoline plus tax administration developments caused the tax collection trend to reverse itself. This development certainly deserves commendation, however, until the government of South Viet-Nam is able to make substantial collections from its basic agricultural production activities, it has not turned the fiscal viability corner.

LA FISCALITE DU VIET-NAM MERIDIONAL

par R. W. LINDHOLM

RÉSUMÉ

Le système fiscal du Viet-Nam utilise peu les impôts directs. L'impôt sur le revenu produit quelques recettes, mais presque toutes sont levées sur les sociétés. L'impôt réel d'Etat produit fort peu de recettes hors de la région métropolitaine de Saigon. Les impôts sur les affaires, tels que la plupart de ceux qui proviennent de l'enregistrement et de la patente et l'ancienne taxe sur le chiffre d'affaires ont été la source d'abus provenant d'une base mal établie et d'un taux dont on ne s'attendait pas à ce qu'il fût en général strictement appliqué. Le système fiscal perçoit des recettes négligeables sur les activités commerciales intérieures, mais, en compensation, il taxe les importations et les produits de consommation de type occidental, tels que les cigarettes et l'essence qu'on peut sans hésiter classer dans les produits de luxe.

Ceci donne un système fiscal de structure fragile. Les rentrées fiscales courantes en 1955 furent inferieures de 453.128.000 piastres à celles de 1954. Cette diminution dans les rentrées se situa dans une période de montée des prix d'environ 10 % et alors que les importateurs percevaient de substantielles subventions. Des recouvrements fiscaux comparables de 1955 et 1956 montrent une tendance continue à la baisse (les recouvrements de la plus grande partie des impôts d'Etat pour les cinq premiers mois de 1956 étaient de 10% inférieurs à ceux de 1955) alors que les prix continuaient à monter. L'adoption de la taxe à la production en 1957, plus d'autres taxes supplémentaires sur les produits de luxe et l'essence, plus d'autres créations des services fiscaux furent à l'origine du renversement de la tendance des recouvrements. Cet accroissement mérite certainement d'être approuvé; cependant il faudra attendre que le Viet-Nam méridional soit dans la possibilité de percevoir de substantiels recouvrements de ses activités agricoles de base pour estimer qu'il a doublé le cap d'une fiscalité viable.

EXPORT TAXES IN CEYLON, 1948–52

CHARLES E. STALEY [1])

In recent discussions of economic development, some writers have suggested that export taxes (or the analogous devices of marketing boards or multiple exchange rates) are a suitable public finance-commercial policy tool for the underdeveloped economy heavily dependent on foreign trade. For example, Buchanan and Ellis call export taxes a "particularly promising" alternative to export-induced inflation [2]); Lewis advocates stabilizing export prices by varying taxation inversely with the price of exports, which is done most directly and effectively by export taxes in his view [3]); Walter Heller acknowledged their attractiveness under conditions in which underdeveloped countries often find themselves [4]); and E. P. Reubens finds this an important and effective device to insulate the domestic economy [5]). Whatever the economic merits, F. H. Jackson believes that the political advantages of either, on the one hand, ease of hiding the tax from the general public or, alternatively, of persu-

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1) The author is Assistant Professor of Economics at the University of Kansas. He would like to thank Charles P. Kindleberger, M.I.T., who directed the work done on the subject as a Ph. D. dissertation, and Edward G. Nelson, Center for Research in Business, University of Kansas, for helpful advice. The author is responsible for whatever errors remain.

2) *Approaches to Economic Development*, New York, 1953, p. 316.

3) *The Theory of Economic Growth*, Homewood, Illinois, 1954, p. 291.

4) "Fiscal Policies for Underdeveloped Countries", in U.N., *Taxes and Fiscal Policy in Underdeveloped Countries*, ST/TAA/M/8, New York, 1954, pp. 12-13.

5) "Export Taxes and Economic Development", *Political Science Quarterly*, March, 1956, p. 68. An important article which justifies export taxation only until income taxation is administratively feasible is Ursula Hicks, "The Search for Revenue in Underdeveloped Countries", *Revue de Science et de Legislation Financières*, January-March, 1952. Ragnar Nurkse in "Trade Fluctuations and Buffer Policies of Low Income Countries" (the leading article in the recent symposium on "The Quest for a Stabilization Policy in Primary Producing Countries", *Kyklos*, Fasc. 2, 1958) argues for a general countercyclical fiscal policy rather than a reliance on export taxes on the grounds that when the supply for exports is rather elastic with respect to price (the general but not invariable case) it is preferable to let the export volume increase to the utmost when prices are high and let it decline when export prices fall. See *op. cit.*, p. 148.

ading the public that the incidence is borne by the foreign customer or absorbed by unpopular indigenous or foreign owners of large estates are sufficient reasons for using export taxes [6]). The present paper examines the experience of Ceylon with the use of export taxes during the Korean war boom and the subsequent recession as a case study of the merits and difficulties of stabilization via export taxation. Professor Jackson's political advantages will not be surveyed.

Analysis

Export taxes for many years have been "only adopted as a general principle in the customs tariffs of non-industrial exotic, tropical, semi-tropical or industrially underdeveloped countries, and in colonies" [7]). Today such countries are recognized as having unique problems which have become codified in rather a standard model [8]). The pertinent aspects for the study of export taxation are the commonly large role played by the foreign trade sector, the heavy dependence on only a few primary products for exports, the record of instability in those exports [9]), and the inadequate nature of fiscal policy devices available to counteract the national income changes generated by the export variability [10]). While a moderately low export tax may be a permanent feature of the revenue pattern (permanently high rates are likely to result in a switch to other sources of supply or to substitute products — e.g., from natural to synthetic nitrates or from jute to paper packing,) rather more

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[6]) "Political Aspects of Export Taxation", *Public Finance*, No. 4, 1957, pp. 291-296.

[7]) League of Nations, "Export Duties", *Documentation of International Economic Conference*, 1927, p. 6.

[8]) Elaborated at length in Buchanan and Ellis, *op. cit.*, pp. 23-118, and Meier and Baldwin, *Economic Development*, New York, 1957, pp. 273-315.

[9]) U.N., *Instability in Export Markets of Underdeveloped Countries*, ST/ECA/15, New York, 1952, p. 3, reports an average price fluctuation of 26.7 % for eleven commodities within the year during the period 1901 to 1951 and an average cyclical fluctuation of export earnings of 37 % (p. 44).

[10]) R. Goode has an analysis of institutional barries to modern taxation systems in "Reconstruction of Foreign Tax Systems", *Proceedings of 44th Annual Conference of National Tax Association*, 1951, pp. 212-22. Cf. J. Froomkin, "Some Problems of Tax Policy in Latin America", *National Tax Journal*, December, 1957, pp. 370-79.

analytical and policy interest is displayed in variable export tax rates over the business cycle.

The fiscal policy effects of exports taxation depend first of all on the incidence. The considerations of international incidence parallel those of the familiar import tariff analysis [11]). If the importer has an inelastic demand and the export supply is inelastic, the tax is shifted forward; if demand is elastic and supply is inelastic, the tax burden remains on the exporting country. In a cyclical up-turn, more especially a commodity boom such as the Korean war years, the expectation is that the over-all demand for a given primary product is both strong and inelastic; but to a small country in the position of an atomistic competitor, demand may appear elastic. If the export tax is shifted forward, incomes are not stabilized; in fact, they are actually increased, since the exporters have higher incomes than before the boom and the government also has additional revenue, which will likely be spent during the course of the boom. On the downswing, demand falls and typically becomes more elastic, so that a reduction of the tax is in order in the interests of national income stability.

In cases where the international incidence of the tax is on the exporting country, a number of possibilities for sharing the incidence exist, each with different fiscal policy consequences. The producer may be a native of the country with a one-man operation (e.g., "smallholders" in Indonesian rubber) and a relatively inelastic supply curve [12]). He will bear the incidence. Or the producer may be a large estate, plantation, or mine, either foreign or domestically owned; here the possibility for backward shifting to hired labor exists. Recent empirical studies indicate the considerations which are important in deciding whether the possibility is an actuality in any given case. In some countries wages are reported to be conventional, non-monetary, generally at a subsistence level, with the alternative employment opportunity of cultivating one's own land;

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11) See G. Haberler, *Theory of International Trade*, London, 1936, pp. 227 ff., and A. Lerner, "The Symmetry between Import and Export Taxes", *Economica*, August, 1936, pp. 306-313.

12) In the 1930's when the I.R.R.A. attempted to restrict output by an export tax, a tax equal to $^5/_6$ the f.o.b. price of rubber was necessary to get a 50 % cut in output by Indonesian smallholders. P. T. Bauer, *The Rubber Industry*, London, 1948, pp. 38-39.

in this case, no shifting through the form of reduced wages can occur [13]). In other situations a lack of alternative employment exists and one export crop dominates the wage structure; here backward shifting is expected [14]). Alternatively, wages may be linked to the cast of living as in Ceylon [15]), so that only to the extent that the export tax functions as an anti-inflationary device can wages be affected.

All these possibilities indicate that the anti-inflationary effect of the tax may vary widely from country to country. With inelastic foreign demand the tax is shifted abroad and little reduction of domestic incomes results. Even if the tax is not shifted to foreign customers, it may rest on a foreign-owned firm, whose profits are normally remitted [16]); a tax which has the effect of reducing these profits stabilizes the economy only to the extent that investment from retained earnings would be less than otherwise. If the tax rests on indigenous firms, both consumption and investment would be restricted, and also likely the flow of capital to foreign bank accounts. When the tax is shifted to workers, consumption is restrained.

A popular phrase during the commodity boom of the Korean war years was that export taxes served to "mop up windfall profits". For windfall profits resulting from an increase in demand to exist at all, supply must be relatively inelastic. For these profits to be mopped up by a tax, demand must be elastic; otherwise the tax is shifted forward. For some small countries, their segment of world demand may be elastic; but if several exporters of the same com-

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[13]) See J. Adler, E. Schlesinger, and A. Olson, *Public Finance and Economic Development in Guatemala,* Stanford, 1952, pp. 100-102.

[14]) H. Wallich and J. Adler, *Public Finance in a Developing Country*, Cambridge, Mass., 1951, pp. 125-26, argue that El Salvador is a case in point; however, Froomkin and Lidstone, "Tax Problems of Export Economies", *National Tax Journal*, March, 1955, pp. 264-73, come to a different conclusion, reporting that higher wages have to be paid in coffee than in the rest of the economy to get the crop harvested, and that wages would fall only if world coffee prices fall.

[15]) Central Bank of Ceylon, *Annual Report, 1950*, p. 4; in addition to fixing wages and granting a "dearness allowance", the authorities regulate the price of items in estate shops.

[16]) Wallich considers this an advantage of export taxes; see his chapter on "Fiscal Policy and the Budget" in S. Harris, ed., *Economic Problems of Latin America*, New York, 1944, p. 122.

modity pursue a stabilization policy, the total effect is to shift the world supply curve upwards along the inelastic world demand curve, raising world prices so that after all shifting occurs and stabilization is not accomplished.

In a broader fiscal policy setting, the stabilizing features of the export (or any other) tax depends on the disposition of the revenue. In underdeveloped countries,

> "Increased exports give rise to the demand for increased government expenditures to improve ports, transport, and marketing facilities associated with sales abroad. In addition they bring in revenue through export taxes, and somewhat more slowly, through their general income multiplier effect. Lacking a developed capital market, government must delay its expenditures — unless it is prepared to undertake purely inflationary finance through bank credit — until it has the funds in hand [17]).

The general expectation is then that income stabilization which would require an excess of budgetary receipts over expenditures is likely to be a secondary consideration to the opportunity to commence development projects [18]).

Many such projects would not be completed until after the export boom had run its course, in which event they would be stabilizing national income (at the expense of maintaining imports and destabilizing foreign exchange reserves).

In the years of the Korean boom, the U.N. reports that the use of the unexpected revenue for developmental purposes was not as great as it should have been. "Leaving aside the relatively more developed countries, less than 10% of the aggregate increase in export proceeds between the first half of 1950 and of 1951 resulted in higher imports of machinery, metals and manufactures, and transport equipment other than passenger cars." Food and consumer goods took the lion's share of increased export income [19]).

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17) C. Kindleberger, *Economic Development*, New York, 1957, p. 196.

18) H. Wallich argues that an additional feature to be considered is that an export boom greatly increases liquidity, since the "great bulk" of the money supply tends to be generated externally. This liquidity facilitates speculation and government and business investment in the face of limited physical resources, accentuating inflation. See "Underdeveloped Countries and the International Monetary Mechanism", *Money, Trade and Economic Growth: In Honor of John Henry Williams*, New York, 1951, pp. 22-25.

19) U.N., *World Economic Report*, 1950-51, New York, p. 100.

A second matter for concern to stabilizers is the foreign exchange position. An export or other tax in an export boom, by reducing consumer or investor spending on import items or reducing the remittance of earnings of foreign-owned enterprises, can assist in building up the foreign exchange reserves so that imports may be maintained during the subsequent export slump [20]). Usually there would be a lag between the fall in export earnings and the time when consumption levels and investment projects are cut back to the reduced availability of foreign exchange. If reserves have not been built up, exchange control, depreciation or import restrictions may be required. But, as the League of Nations remarked, "Agricultural countries, being in general relatively poor, have usually been eager to spend their foreign exchange proceeds at once, and have been reluctant to build up large liquid reserves for use in bad times. A poor country may naturally prefer progress to stability" [21]). The availability of a stabilization device does not ensure its use.

Ceylon's Export Tax on Tea

The foregoing considerations will now be applied to two cases, that of the use of export taxes in tea and in rubber by Ceylon during the Korean war years. Although both are plantation agriculture crops, differences in supply and demand conditions existed, so that contrasting effects may be brought out.

Table 1

Commodity	1948	1949	1950	1951	1952	1953
	Percentage of Total Export Value					
Tea	63	65	50	44	51	56
Rubber	15	12	27	32	26	23
	Index Numbers of F.O.B. Export Prices (1934-38=100)					
Tea	276	303	351	364	320	342
Rubber	177	162	393	650	451	395

Source: C. Thorogood, *Ceylon,* Second edition, Overseas Economic Surveys, Great Britain Board of Trade, London, 1954, p. 22; Central Bank of Ceylon, *Fourth Annual Report,* 1953, p. 91.

[20]) In the interwar years, only Argentina succeeded in doing this. During the 1936-38 cycle, monetary policy designed to neutralize the foreign exchange inflow and to release it during the slump was introduced and maintained both internal and exchange rate stability. See League of Nations, *International Currency Experience,* New York, 1944, pp. 85-86.

[21]) *Op. cit.,* p. 86.

Table 1 indicates the relative importance of tea and rubber in the economy and the impact of the Korean boom. Rubber was much more severely affected than was tea, as both the price indexes and the changing share of rubber in total exports demonstrates. Total exports composed 45% of total real product in 1948-49 [22]); the change in the terms of trade from 69 in 1948 to 77, 101, 104, and 75 in each of the consecutive following years [23]) correspondingly had a great deal of leverage on the economy.

The impact of the boom changed the balance on current account from —81 million rupees in 1949 to +102 million rupees in 1950; the GNP rose from 3,048 million rupees in 1949 to 4,042 million in 1950 (an increase of one third in one year) and to 4,670 million in 1951 [24]). With the subsequent fall in export demand the balance on current account fell from +89 million rupees in 1951 to —367 million in 1952; GNP dropped to 4,487 million rupees in 1952 [25]). With the banks purchasing foreign exchange, the money supply increased by 38% in 1950 [26]). The government showed a budgetary deficit of Rs. 153.6 million in 1950 [27]); but with all these expansionary forces there was not much apparent open inflation. The Central Bank's estimate of the internal price rise in 1950 was only 3%; the ECAFE reported an increase in the index from 99 in 1949 to 105 in 1950 [28]). Wage controls, including the wages on tea and rubber estates, and subsidies on flour and imported rice (the principal wage goods) prevented the price indexes from showing the effects of inflation. Import controls and taxation prevented the spill-over of inflation from bringing pressure on the balance of payments during the early months of the boom; after a reserve of foreign exchange had been built up, import controls were removed in late 1950 and early 1951, which helped reduce inflationary pressure on domestic supplies. The contemporary expert

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22) U. N., *World Economic Survey*, 1956, p. 108.

23) Central Bank of Ceylon, *Annual Report for 1954*, p. 91.

24) U. N., Economic Commission for Asia and the Far East, *Economic Survey of Asia and the Far East in 1954*, p. 35. This source will be cited as U. N., ECAFE, *Survey...*, hereafter.

25) *loc. cit.*

26) Central Bank of Ceylon, *Annual Report for 1950*, p. 3.

27) *Ibid.*, p. 15.

28) *Ibid.*, p. 4; U. N., ECAFE, *Survey..., 1950*, p. 494.

view was that Ceylon went through a "mild inflation" [29]).

In this setting, a variety of fiscal-monetary actions were taken: reserve requirements were raised, moral suasion applied, income tax rates were increased, and, most significantly, the export tax was raised [30]). The comparison between the importance of the latter two actions is demonstrated by the fact that estimated increased revenue from income taxes for the year following the rate increases was Rs. 5 million [31]), whereas the yield from export taxes increased from Rs. 167.7 million in fiscal 1949-50 (28.5% of total tax revenue) to Rs. 282.7 million in 1950-51 (36% of total tax revenue) [32]). In 1951-52, reflecting the post-Korean slump in exports, export duties fell to Rs. 227.2 million, and the following year to Rs. 172.2 million [33]). Thus a distinct contra-cyclical trend was present in export taxes.

In the commodity boom of the early 1950's, tea contributed less than rubber, tin, wool, and jute [34]), which were the war-scarce items subject to stockpiling and speculative inventory demand. Nevertheless, the value of tea exports rose from Rs. 590 million in 1948 to Rs. 752 million in 1950, 800 million in 1951, and fell to 723 million in 1952 [35]). Table 1, above, shows the rise in the f.o.b. export price. As part of the anti-inflationary campaign, the export tax on tea was raised several times, as Table 2 shows.

To evaluate the fiscal policy contribution of these changing tax rates, the question must be answered: did the export tax on tea reduce disposable income in Ceylon, or was it passed on to consumers? The short run supply function in tea, according to V. D. Wickizer, is elastic with respect to price as a general proposition [36]).

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[29]) U. N., ECAFE, *Survey..., 1951*, p. 270; Central Bank of Ceylon, *Annual Report for 1950*, p. 12.

[30]) These actions are described in detail in U. N., ECAFE, *Survey..., 1950*, p. 433 and 474, and *Survey..., 1951*, p. 280.

[31]) U. N., ECAFE, *Survey..., 1950*, p. 433.

[32]) International Bank for Reconstruction and Development, *The Economic Development of Ceylon*, Baltimore, 1953, p. 173; C. Thorogood, *Ceylon: Economic and Commercial Conditions*, Overseas Economic Surveys, Great Britain Board of Trade, London, 2nd edition, 1954, p. 4.

[33]) Central Bank of Ceylon, *Annual Report for 1953*, p. 76.

[34]) See U. N., *World Economic Report, 1951*, p. 91.

[35]) International Monetary Fund, *International Financial Statistics*, May, 1957, p. 62.

[36]) *Tea under International Regulation*, Stanford, 1944, p. 16; see also IBRD, *op. cit.*, p. 227.

Table 2

Tea Export Tax Rates in Ceylon

Date in effect	Rate (Rs./lb., exclusive of cesses)
February, 1947	0.38
July 20, 1950	0.45
October, 1950	0.53
March 14, 1951	0.60
October 1, 1951	sliding scale tax:
	estimated f.o.b. value per lb. — rate per lb.
	less than Rs. 2.20 — 0.35
	2.20—2.70 — 0.35 plus 40% of excess over 2.20
	2.70—3.20 — 0.55 plus 50% of excess over 2.70
	3.20—3.70 — 0.80 plus 60% of excess over 3.20
	greater than 3.70 — 1.10 plus 70% of excess over 3.70
October 30, 1953	0.45

Source: C. Staley, *Export Taxes,* Unpublished Ph. D. Dissertation in the Dewey Library, M.I.T. (1956), p. 120.

The argument is that when prices are high, coarse plucking (taking buds, leaves, and stalks) is practiced; when prices fall, fine plucking (taking only buds and a few leaves) is used. Hence quantity varies with price. But Table 3 indicates a low elasticity in the period in question.

Table 3

Production and Export of Tea in Ceylon, 1948-53
(Thousand Metric Tons)

	1948	1949	1950	1951	1952	1953
Production	137	140	143	148	144	156
Exports	134	135	137	138	143	152
Index numbers for exports (1953=100)	88	88	89	91	94	100

Source: Line 1, U.N., Food and Agricultural Organization, *Yearbook of Food and Agricultural Statistics, Part I: Production,* 1951, p. 91; 1952, p. 92; 1953, p. 96. Line 2, *Ibid., Part II, Trade,* 1951, p. 118; 1954, p. 184. Line 3, IMF, *op. cit.,* pp. 64-65.

Exports actually rose in 1952 when prices fell, apparently a carry-over from the large 1951 crop. On this showing, a nearly but not completely inelastic supply function is the appropriate assumption.

Demand is a bit more complicated. Casual empiricism suggests inelasticity with respect to price for world demand as a whole. A study of one of the major customers, the United Kingdom, resulted in a computation that a decrease in price of 5% or an increase in incomes of 10% would cause an increase of 2.5% in quantity consumed [37]), which bears out the casual observation. The demand for Ceylonese tea specifically shares the characteristic of inelasticity. Ceylon accounts for one fifth of world tea production (second only to India) and one third of world export volume; in fine tea, Ceylon supplies 65% of total world exports. Hence, in the analysis of tax shifting export demand will be considered inelastic.

In an industry where both supply and demand are inelastic (not perfectly inelastic), some part of a commodity tax is shifted forward, but some part rests with the producer [38]). World supply and demand curves shifted a number of times and for a number of reasons during this period [39]), so that quantitative measurement of the tax incidence seems impossible. But the reader can sketch inelastic supply and demand curves, raise the supply curve by the assumed amount of the tax, and observe that the market price is raised but not by the full amount of the tax. Thus, the conclusion is that part of the export tax revenue on tea was not extracted from the domestic flow of income and could not be regarded as anti-inflationary.

Furthermore, to the extent that the export tax rested on producers who were domiciled overseas (sterling companies), its effect would be to reduce the flow of interest or profit overseas. Again, the proceeds of the tax would not be anti-inflationary, since the taxed funds would not have entered Ceylon's circular flow of income. Data on the fraction of the industry thus affected is scanty; I. Jen-

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[37]) E. Broster, "Elasticities of Demand for Tea and Price Fixing Policy", *Review of Economic Studies*, Vol. 6, 1939, p. 172. The period studied was 1924-36.

[38]) The typical pattern of organization is for plantations to be administered by agency houses (of which there are 26); the agencies not only supervise plantation operations, but also handle sales and shipping, functioning as export agents. Probably none of the tax burden rests with them. See K. Stahl, *The Metropolitan Organization of British Colonial Trade*, London, 1951, pp. 171 ff.

[39]) For example, the British government's Ministry of Food discontinued bulk buying of tea in April, 1951; tea rationing and price control in England stopped in October, 1952; India raised her export tax on tea from Rs. .12/1b to Rs. .25/1b. in 1950.

nings estimates on the basis of a census that in 1934 foreign capital represented 80% of the investment in export industries, and saw no reason not to use the same figure in 1948 [40]). Between 1948 and 1953 an estimated 6% of the European holdings was purchased by the Ceylonese [41]); so that European holdings remained high. Thus for most of the tea and rubber industry the anti-inflationary effect was less than would be indicated by the fraction of the tax resting on the industry. A reduction in aggregate demand was achieved only to the extent that profits would have been plowed back into investment. Only a small amount of such re-investment of earnings was likely [42]), in spite of the recognized need for investment, particularly in factories to cure and process tea [43]).

The conclusion is that the export tax on tea made only a minor contribution as an anti-inflationary device in the sense of absorbing any private aggregate demand. Iit did generate additional revenue for the government from the forward shifting and from the foreign ownership aspects, which was actually used to increase total demand for goods. Before examining the use of government revenue, however, the application of export taxes in the rubber industry will be surveyed.

Ceylon's Export Tax on Rubber

The Korean upturn had a much more pronounced effect in the rubber industry. The price of rubber in July, 1949, in Ceylon was about Rs. .5/lb.; following the September devaluation, the price rose

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40) *The Economy of Ceylon*, 2nd ed., Madras, 1951, p. 28. See also Stahl, *op. cit.*, p. 171, who reports, "No analysis has been made by the government in Ceylon of ownership, capital investment, etc., in the tea and rubber industries, so that no accurate estimate can be given of the division of ownership as between private owners and limited liability companies, or as between sterling and rupee concerns. But the general pattern is for the estates to be controlled by public limited liability companies, the majority of them being sterling companies with their headquarters in Britain..."

41) IBRD, *op. cit.*, p. 230; "Ceylon: An Economic Survey", *Economist*, February 14, 1953, p. 456.

42) The International Bank noticed that a number of factors inhibited foreign investment, notably "incidents giving the impression that external capital is unwelcome" and the uncertainity that future governments might evidence hostility even to the point of expropriation. *Op. cit.*, p. 516. See also *Economist*, November 28, 1953, p. 653.

43) Wickizer, *Coffee, Tea, and Cocoa*, Stanford, 1951, pp. 435-40; IBRD, *op. cit.*, p. 231.

and reached Rs. .76/lb. in December [44]). A year later the price was four times as great (Rs. 2.80/lb. in December, 1950); the total value of rubber exports also increased by about four times, from Rs. 124.5 million in 1949 to Rs. 405.5 million in 1950 [45]). The price peak was reached in February, 1951, at Rs. 3.17/lb. With the end of the speculative boom, prices fell for the rest of the year to a low of Rs. 1.69/lb. in November [46]).

The government of Ceylon responded to this boom in rubber by imposing an export tax of Rs. .15/lb; this rate was not changed until March, 1951, one month after the price peak was reached, when a rate of Rs. .50/lb. was imposed. As the price fall continued, this rate became higher relative to the price; in order to make adjustments in the rate more flexible, a sliding scale tax similar to the one on tea was imposed in September, 1951 [47]). Tax collections on rubber were roughly Rs. 30 million in 1950 and Rs. 100 million in 1951. Did this contribute to stabilizing the economy?

In the literature, the short-run supply curve of rubber is considered inelastic. New trees take seven years to mature to bearing stage, so expansion of capacity is irrelevant. The factors making for inelasticity are these: 1.) The flow of latex is continuous, so a crop unharvested is a crop lost. 2.) The agencies which manage estates are more interested in a long life for the estate than in a nice adjustment of output for profit maximization. 3.) The cost structure of the industry, which contains 40 to 50% overhead costs, makes restriction of output an unpopular course. 4.) The reliance on long-term contract Indian labor prevents short-term labor force adjustments. 5.) For small-holders, there is scant opportunity for alternative employment or alternative crops [48]).

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[44]) I.M.F., *International Financial Statistics*, March, 1950, p. 143.

[45]) U. N., ECAFE, *Survey..., 1950*, pp. 393-96; Central Bank of Ceylon, *Annual Report for 1951*, p. 71; U. N., *Review of International Commodity Problems*, 1950, pp. 31-33.

[46]) U. N., ECAFE, *Survey..., 1951*, pp. 46-47; Central Bank of Ceylon, *Annual Report for 1951*, p. 2 and p. 71.

[47]) The tax was on the same scale of progression as the tea tax but started from a lower initial flat rate. The exact scale is given in the Central Bank of Ceylon *Bulletin*, November, 1951, p. 7.

[48]) These points are developed in K. Knorr, *World Rubber and Its Regulation*, Stanford, 1942, p. 60-65; P. T. Bauer, "A Note on Costs", *Economica*, N. S. Vol. 12, 1945, pp. 92-95; P. T. Bauer, "Rubber Production Costs during the Great Depression", *Economic Journal*, Vol. 53, December, 1953, p. 367. Cf. P. T. Bauer, *The Rubber Industry*, London, 1948, p. 31, and p. 51.

But the fact of the matter is that in 1949, when the annual average export price was Rs. 1.96/lb., 92,000 metric tons were exported; and in 1950, at an annual average export price of Rs. 2.11, 120,000 metric tons were shipped [49]). In 1951, the annual average price dropped back to Rs. 1.94/lb. and exports to 105,000 metric tons [50]). Obviously, the supply of rubber was responsive to price. A simple calculation of arc elasticity of supply yields the coefficient 2.44, using the average annual export prices and quantity data for 1949 and for 1950. Actually, the movement between those years was a combination of both a movement along the supply curve (from the shift in demand) and an upward shift in the supply curve. For one thing, real wages of estate workers stood at an index number of 121 in 1949, and rose to 137 in 1950 [51]). Also, the price of rice was rising, which increased costs to estates since they were obliged to supply rice at a fixed price to workers. Finally, the price data is in terms of export prices; the price to the producer equalled the export price in 1949, but was less by Rs. .15/lb. in 1950 after the export tax was imposed; hence the supply curve for 1950 was shifted up from this tax. The conclusion is that supply elasticity was actually greater than 2.44 by an indeterminant amount [52]), and that in this instance short-run elasticity prevailed, contrary to the

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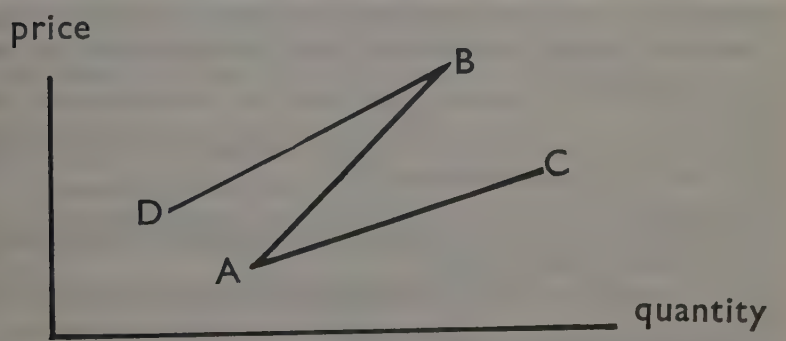
[49]) This average conceals the rising trend, which brought the price to 2.80/1b. at the end of the year.

[50]) See Central Bank of Ceylon, *Annual Report for 1953*, pp. 94-95.

[51]) Central Bank of Ceylon, *Annual Report for 1951*, p. 6.

[52])



The calculation of 2.44 is derived from the assumption that A (quantity supplied in 1949) and B (quantity supplied in 1950) lie on the same supply curve. Actually,

Bauer-Knorr analysis. The International Bank [53]) attributes the increased output in 1950 to slaughter-tapping by smallholders; the evidence cited is that for that year, contrary to the usual case, smallholder output was about 50 lbs. per acre higher than estate yields. No reason is adduced for this behavior.

The demand for Ceylonese rubber would ordinarily be considered elastic, since it amounts to about 5% of total world production of natural rubber [54]). Total world demand in the short run is usually income elastic but inelastic with respect to price [55]). (In the long run, the rise of synthetics makes for more price elasticity.) In the immediate context of the Korean boom, the U.S. stockpiling demand, a wave of speculative buying, and increased demand from Europe as European income rose resulted in a shift of world demand curves to the right, with probably heightened inelasticity. The major producers increased their export taxes; Malaya changed from a 5% ad valorem tax to a sliding scale which increased 5% with each 20% increase in price in January, 1951 [56]), and Indonesia raised its export duty from 36.4 *c* (Indonesian) per kilogram in the third quarter of 1950 to 64.5 *c* in the fourth quarter and on up to 95 *c* early in 1951 [57]). To the extent that these actions increased world prices, the demand curve for Ceylonese rubber would be raised. It also seems plausible that the normally fairly high price elasticity for this small supplier would have been reduced.

Ceylon then had a relatively elastic short-run supply curve and a demand curve of fairly low elasticity. In these circumstances one would expect a considerable part of the export tax, perhaps the major part, to be shifted forward; certainly far more than if the normally low elasticity of supply and high elasticity of demand had prevailed. The comments on foreign ownership and on the lack of backward shifting opportunities made with respect to the tea tax hold here also [58]).

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the 1949 supply curve was more like AC, with an upward shift in 1950 to DB. Both AC and DB are more elastic than is AB.

[53]) *Op. cit.*, p. 240.

[54]) IBRD, *op. cit.*, p. 148. In mainland China, Ceylon has dealt as a bilateral monopolist, bartering rubber for rice.

[55]) Knorr, *op. cit.*, p. 71; U. N., *A Study of Trade Between Asia and Europe*, p. 64.

[56]) *Economist*, December 9, 1950, p. 1023.

[57]) U. N., ECAFE, *Survey..., 1950*, p. 431.

[58]) Coconuts also were subject to an export tax; since coconuts amounted to

The foregoing analysis leads to the conclusion that in this episode the use of export taxes made only a modest contribution on the upswing to stabilizing exporters' incomes or the national income. By the time the downswing had started, tea, rubber, and coconuts had all been placed on a sliding scale tax. This did afford some relief, since the tax was adjusted much more rapidly to changing demand conditions than it had been during the early part of the period when the specific tax changed by legislative decree was used. In spite of the obvious attractions of the flexible tax device, the sliding scale in tea was abandoned in October, 1953 and on coconuts in December, 1953; it was retained on rubber, however. The *Eastern Economist* argued that at this time the incidence of export taxes had shifted against the tax levying countries [59]); in tea in Ceylon, the contrary is probably true; while the demand curve had shifted to the left, it maintained its inelastic characteristic, so that the degree of forward shifting (the difference between the equilibrium price without the tax and the export price including the tax) probably remained about the same. The reasons for dropping the sliding scale were probably not so much the change in incidence as the loophole found by shippers, who could register for a particular rate of duty, irrespective of when they bought from the grower or when the shipment was made. Consequently most registrations were made when prices were low [60]). Another reason for changing over to a specific duty was government concern over the loss of revenue when prices began falling [61]). The government had learned that stabilizing producers' incomes had destabilized their own [62]).

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only 18 % of total value of exports and the duty to 5 % of government revenue (compared to 18 % for tea and 8 % for rubber) no extensive analysis will be made. Demand is elastic, as coconut oil competes with many other vegetable oils in industrial uses (the chief source of demand); export supply proved to be fairly elastic. Probably some forward shifting occured. For an extensive survey see my *Export Taxes,* unpublished Ph. D. dissertation in the Dewey Library, M.I.T. (1956).

[59]) February 14, 1952, p. 217.

[60]) Manipulation of tax rates in the shippers' favor is discussed in U. N., ECAFE, *Survey..., 1953,* p. 47, and *Eastern Economist,* November 6, 1954, p. 775.

[61]) Thorogood, *op. cit.,* p. 26, estimates that Rs. 60 million in revenue was lost in 1952-53 by use of the sliding scale as compared to even a low level specific excise.

[62]) The sliding scale was maintained in rubber because the barter deal with Mainland China had assured the bulk of the rubber industry a fixed annual price.

To conclude the investigation, the use made by the government of the tax revenues will be examined. All components of the GNP showed a rising trend, and between 1948 and 1951 the GNP increased from Rs. 2,768 million to Rs. 4,670 million (falling to Rs. 4,487 million the next year) [63]). This increase of 69% in the GNP included a sharp increase, on the order of 137% (from Rs. 152 million to 360) in government outlays on capital account (nearly all for development purposes). With the usual lag in government planning and execution, capital expenditures on government account went up to 519.6 million rupees the year after GNP and export prices had turned down. Government spending on current items nearly doubled between 1948 and 1952, while food subsidies nearly tripled [64]). The sizeable increases in tax receipts did not suffice to cover the government spending; net domestic borrowing was positive each year from 1948 through 1952, and in addition cash balances left over from World War II were drawn on each year except 1951. In that year borrowing was Rs. 114 million and the cash balance increase was only 64 million, so even in that most properous year government expenditure exceeded tax revenue [65]).

Conclusion

The conclusion is that in this instance export taxes should not be regarded as stabilization devices [66]). The analysis of the individual commodities showed that a large part of the tax was actually payed by foreign customers or foreign owners of estates, so that exporters'

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[63]) U. N., ECAFE, *Survey..., 1954*, p. 35.

[64]) The food subsidies were controversial. They were used to keep down the price of imported rice to the consumer, but mounted until they took 22 % of government expenditures. The Central Bank of Ceylon (*Annual Reports, passim*), the IBRD (*op. cit.*, pp. 185-86), and the ECAFE (*Survey..., 1951*, p. 291) all criticized the policy on the grounds that the funds would have been better used in development expenditure and that it distorted real costs, creating an artificial profit margin in the export sector. The government maintained the policy as a social welfare measure to stabilize the standard of living in an inflationary setting, but found that it destabilized the budget on the downswing and so abandoned it in favor of attempts to stimulate domestic self-sufficiency in rice.

[65]) All data from Central Bank of Ceylon, *Annual Report for 1953*, pp. 76-79.

[66]) The Minister of Finance emphasized the stabilization aspects of the export tax, stating that "...we had in mind the need for meeting the increases in expenditures, but also the desirability of reducing the inflationary effects of the Government's financial operations". *Budget Speech*, 1951-52, by The Hon. Mr.

incomes and the national income was not insulated from increased demand. The tax revenue thus acquired was immediately used for capital formation or for current expenses, including food subsidies, so that it in fact resulted in an increase in the national income. The goal of stabilization proved subordinant to the other goals of the society.

In conditions of less extreme export booms, such as occured in 1955 and 1957 [67]), more actual stabilization would be expected, for demands would not be so inelastic. The case reviewed in this article, however, lends support to the suggestion of Professor Nurkse [68]) that serious consideration be given to taxation *generally* rather than to efforts to stabilize the domestic economy by operating on the export sector alone [69]).

J. R. Jayawardene, Colombo, Department of Information, p. 13. At another point the Minister of Finance argued that export taxes were regarded as a substitute for a land tax, which was difficult to administer in the absence of a comprehensive cadastral survey. *Op. cit.*, p. 36. Since a land tax would be capitalized, whereas the incidence of the export tax was largely shifted to the foreigner, such a justification for export taxation has no basis in fact.

[67]) See, for example, the *Economist* Commodity Price Indicator, June 21, 1958, p. 1101.

[68]) *Op. cit.*, p. 150-51.

[69]) Ceylon, as a matter of fact, did move in the direction of taxation generally. As Theodore Morgan pointed out in his review of the IBRD's *The Economic Development of Ceylon* (*American Economic Review*, June, 1954, p. 419), the contention of the IBRD that income tax rates were too low overlooked the so-called profits tax, which applied to nearly everyone except wage-earners. But the change in all direct taxes between 1948 and 1952 was only 98 million rupees, while the change in export taxes was Rs. 133 million between 1948 and 1951. Import duties increased by Rs. 80 million. The tax structure thus was heavily biased toward, even if not completely reliant on, the export tax. The current budget continues the change to a system less heavily reliant on export taxes; new taxes on wealth, capital gains, expenditure, and gifts have been announced. See "Ceylon's Belt-Tightening Budget", *Economist*, July 26, 1958, pp. 303-4. An article by S. Kanesathason, "Export Instability and Contracyclical Fiscal Policy in Underdeveloped Export Economies: A Case Study of Ceylon since 1948," I.M.F. *Staff Papers*, April, 1959, appeared while this article was in proof. It deals broadly with theory and with Ceylon's experience in budgetary policy, expenditure, revenue, debt management, and monetary policy, but does not investigate incidence, which is the core of this paper.

LES IMPOTS A L'EXPORTATION A CEYLAN 1948-1952

par C. E. STALEY

RÉSUMÉ

Le sujet de cet article est d'apprécier l'opinion de quelques auteurs (N. Buchanan et Ellis et W. A. Lewis entre autres) affirmant que les impôts à l'exportation sont un moyen de stabilisation possible pour les pays sous-développés orientés vers l'exportation. On a choisi pour cette analyse le cas particulier de Ceylan pendant la guerre de Corée.

L'efficacité des impôts à l'exportation dans la stabilisation du revenu national dépend d'abord de l'incidence internationale, car si l'effet de l'impôt est d'augmenter les prix d'exportation (par exemple si l'impôt est répercuté à l'étranger) le revenu disponible n'est pas diminué et l'impôt n'est pas stabilisateur. Tel sera le cas si la demande pour le produit à exporter est inélastique et si l'offre est élastique; une répercussion partielle se produira à l'étranger si la demande est inélastique et si l'offre l'est aussi. Même si l'impôt n'est pas répercuté en avant, il peut peser sur une entreprise étrangère qui, normalement, envoie ses bénéfices hors du pays; dans ce cas, il n'y aurait réduction de la demande effective que si le réinvestissement des bénéfices se trouvait diminué. Une telle conjoncture n'est pas probable dans la majorité des cas, les réinvestissements étant très faibles à leur début. Un impôt à l'exportation ne peut être stabilisateur que dans certaines circonstances — demande élastique à l'exportation, offre inélactique et prédominance de nationaux dans les propriétaires d'entreprises exportatrices.

On doit en second lieu considérer la façon dont le gouvernement dispose du revenu. Si le gouvernement dépense rapidement les nouveaux revenus de ses impôts, il prendra simplement la place des dépenses des particuliers (si l'incidence pèse sur l'exportateur) ou augmentera la demande totale effective (si l'incidence pèse sur le client). Aucun de ces effets ne sera stabilisateur mais les gouverne-

ments de pays sous-développés sont notoirement réticents à accumuler des excédents de caisse et agissent habituellement à l'inverse de la stabilisation.

L'expérience de Ceylan quant à l'impôt sur l'exportation constitue la suite de l'article. On étudie d'abord l'incidence qu'a eue le boom des denrées causé par la guerre de Corée sur les exportations de Ceylan, sur les termes de l'échange, la balance des paiments et le revenu national. On analyse ensuite l'action anti-inflationniste de l'impôt à l'exportation sur le thé. L'offre et la demande de thé étant toutes deux inélastiques, autant qu'on peut en juger, pendant la guerre de Corée on en conclut qu'une partie de la taxe fut répercutée en avant sur les consommateurs étrangers et qu'une partie pesa sur les producteurs ceylanais. Mais comme une grande partie des plantations de thé de Ceylan appartiennent à des étrangers, l'incidence de l'impôt se traduisit pour eux par une diminution des bénéfices à rapatrier et de la demande effective à Ceylan dans la limite (sans doute restreinte) où le réinvestissement des bénéfices fut empêché.

L'industrie du caoutchouc fut beaucoup plus touchée par la répercussion de la guerre de Corée, les prix montant d'environ 6 fois. L'impôt à l'exportation qui fut appliqué au caoutchouc fut sans doute répercuté à l'étranger, puisque l'offre se révéla élastique, alors que la demande était inélastique plus qu'il n'était usuel. Donc, les impôts perçus sur le caoutchouc ne furent pas un facteur de stabilisation.

Vers la fin du boom, Ceylan institua une échelle mobile pour les impôts à l'exportation sur le thé et le caoutchouc. Ceci permit sans doute quelque stabilisation pendant la baisse, car les taux de l'imposition étaient automatiquement réduits quand les prix baissaient. La perte qui en résulta dans le produit de l'impôt conduisit le gouvernement à revenir à une imposition spécifique sur le thé.

Le gouvernement augmenta ses dépenses lorsqu'il perçut de nouvelles ressources fiscales; les dépenses en capital, les postes courants, les dépenses alimentaires montèrent rapidement.

Comme une grande partie du produit de l'impôt à l'exportation

ne venait pas de ressources domestiques mais d'acheteurs étrangers, le gouvernement favorisa nettement la demande effective en temps d'inflation.

La conclusion est que, dans ce cas particulier, l'impôt à l'exportation ne fut pas un stabilisateur efficace, ce qui appuie la suggestion du Professeur Ragnar Nurkse, à savoir qu'on doit prendre sérieusement en considération l'imposition en général, plutôt que de considérer la seule imposition du secteur exportation.

THE COUNTER-CYCLICAL BEHAVIOUR OF PUBLIC INVESTMENT IN THE UNITED KINGDOM SINCE THE WAR*)

by S. PLEASE

University of Liverpool

In the discussion of the policy implications of Keynesian analysis which took place before, during and immediately after the war, great emphasis was placed on the importance of public fixed investment as a weapon of short-run economic policy. The temporary stepping-up or reduction of this aggregate of expenditure to compensate for an opposite variation in some other aggregate, was regarded as one of the most desirable, efficient and easily operated methods by which the level of aggregate expenditure could be stabilised. The periodic balance of payments' crisis, Korean rearmament and the private investment boom have all required, at least in part, short-term economic measures of the kind visualised in the theoretical literature. How then has public investment behaved in this period? Undoubtedly there is a widespread feeling that is has in fact failed to act in the hoped-for manner. Much of the criticism of public investment has, of course, been directed to its level over the whole period, especially vis-à-vis private investment, and with this we are not here concerned. But some of it has also referred to the specific problem of the timing of these capital outlays. Perhaps of most significance in this respect have been the criticisms of R. F. Harrod [1]).

However no survey of the actual behaviour of public investment in relation to the problem of economic stability has in fact been undertaken and it is to this task that we address ourselves in this paper. The statistical information is all derived from the official National Income and Expenditure Accounts, 1956 with the exception of the labour market statistics in Table I.

In the first place we must survey the period in order to locate those years when, with the advantage of hindsight, we can see

*) The publication of this article which was accepted by the Editor in 1957, has unfortunately been overlooked. The author has not revized it in view of the fact that the material and conclusions which it contains are specifically referred to in a subsequent article published in "Kyklos", 1959, Fasc. 2.

1) R. F. Harrod: „Are These Hardships Really Necessary" (Londen, 1947), „And so it goes on" (London, 1951) and „The Director" (August 1955).

that the economy experienced a temporary fluctuation from its trend of development. It must be emphasised that we are not here concerned with this trend itself. Whether, for instance, it has been consistently too close to the literal full employment ceiling, whether it has over-emphasised private and/or public consumption at the expense of capital creation, whether it has resulted in too low a level of overseas earnings, are, of course, questions which reach to the heart of general economic policy. Here we merely take the trend which reflects these policy decisions as given and attempt to analyse the public investment component from the point of view of keeping the economy more closely to the trend.

Several magnitudes could be used reflecting the fluctuations of economic activity and in Table I below we have selected three which in the post-war years have seemed to be of most significance. Net overseas investment has been taken as the main indicator on the assumption that it has been determined (NOT computed) in large measure as a residual and thus its variations have reflected the degree of demand inflation or deflation in the economy. Of course factors such as the devaluation of sterling in 1949, relative rates of inflation or deflation in other countries, changes in the terms of trade, etc. all undermine our assumption and we look for support for the general conclusions to which it gives rise in the figures of unemployment and of unfilled vacancies.

Table I

NET OVERSEAS INVESTMENT, UNEMPLOYMENT AND UNFILLED VACANCIES FOR THE UNITED KINGDOM 1948—1955.

Year	1952 = 100		
	Net Overseas Investment	Unemployment	Unfilled Vacancies
1948	56	72	164
1949	75	62	151
1950	178	69	133
1951	–146	48	170
1952	100	100	100
1953	72	69	108
1954	83	56	129
1955	—42	48	159

The general pattern of these years is a persistent deflationary tendency (compared with the trend, we must emphasise, not necessarily in any absolute sense) from the convertibility crisis of 1947 to 1950 followed by the demand inflation engendered by the Korean War in 1951. Again in 1952 as in 1948 we saw a marked

deflationary movement which was slightly reversed in 1953 and 1954 and more markedly so in 1955. For public investment to have operated as a stabilising force we should, therefore, look for increasing annual outlays in the period 1948-1950, a rapid decline in 1951 followed by a rise in 1952 after which outlay should have remained fairly stable until a further decline during the investment boom. It is, in particular, by the behaviour of public fixed investment in the highly inflationary years of 1951 and 1955 that we must judge the part it played in short-term economic policy.

When we come to analyse its behaviour over this post-war period we come up against the difficulty that changes in its level have stemmed from two independent causes. Firstly they have resulted from variations in the scope of the public sector due to nationalisation and denationalisation legislation and secondly from variations in the level of investment outlays relating to a given constant public sector. It is with the latter consideration that we are interested in this context and we must, therefore, isolate it from the first. This would not be difficult if each nationalisation and denationalisation measure operated from a specific date. Unfortunately this is only true in certain cases. In others the process of public acquisition or public disposal has extended over several years. For instance negotiations for the acquisition of road transport undertakings under the 1947 Transport Act were spread over a considerable period and the subsequent disposal of part of them under the 1953 Transport Act is still in progress as is also the case with the sale of steel undertakings under the Iron and Steel Act of 1953. Because of this it is not possible to take the figures of aggregate annual public investment given in the National Income and Expenditure accounts and adjust them so that they represent investment in a constant sector of the economy. To do this we would require to know the addition or subtraction necessary in any one year in respect of industries in process of being nationalised or denationalised and in fact we cannot determine even with the assistance of the reports and accounts of the nationalised industries what these amounts should be. As a result we must build up a figure of public investment by aggregating investment outlays by sectors of the economy which were in the main in public hands in most of these years. This is done in Table II below. The most obvious decisions which we have made are to omit the „shuttlecock" of the steel industry from the public sector and contrariwise to include all capital expenditure by the road passenger transport and air transport industries in the public sector. Only in the case of housing is the public contribution to the national aggregate isolated each year for in this case not only is the annual expenditure involved very

Table II

GROSS FIXED CAPITAL FORMATION BY THE PUBLIC SECTOR IN CURRENT PRICES.

£ million.

	1948	1949	1950	1951	1952	1953	1954	19
Coal Mining	23	30	27	29	41	57	76	
Government Research	13	14	17	22	31	34	29	
Gas	25	29	33	40	46	47	52	
Electricity	99	122	138	148	160	180	214	2
Water	14	20	24	28	33	38	36	
Railways	41	44	45	45	41	55	64	
Road Passenger Tpt.	38	44	41	30	27	24	25	
Harbours, Docks, Canals	7	8	9	9	11	13	13	
Air Transport	12	17	14	12	13	16	17	
Postal, Telephone, Radio	38	44	46	54	65	72	76	
Housing	267	263	264	288	352	399	366	3
Education & Child Care	30	44	58	69	78	80	82	
Health Services	16	20	20	22	22	23	25	
National Assistance	1	1	2	2	2	2	2	
Police, Prisons & Fire	1	2	3	5	6	6	6	
Roads & Public Lighting	8	10	11	13	14	15	16	
Sewerage	11	14	16	22	29	36	38	
Other L.A. Services	4	4	7	11	9	8	9	
Other Cent. Govt. Services	19	15	17	19	14	13	12	
Total	667	745	792	868	994	1,118	1,158	1,2

large but, as we shall see later, changes in this sector are extremely important in our analysis of the timing of aggregate public investment.

The first and most obvious fact which stands out in the final row of this table is that far from there being any question of fluctuations in the absolute money value of public investment over these years the aggregate has persistently increased. This, however, is not perhaps surprising in a period of rising prices and of rising productivity or, at least, it need not necessarily imply that no assistance whatsoever was given by public investment to counter short-run inflationary and/or deflationary tendencies in the economy. In the first place we can correct these figures for price changes in order to estimate the variations in the real demand of the public sector on investable resources. This is done in Table III in which the figures in Table II above are grouped and then expressed in terms of 1948 prices.

This table gives an entirely different picture. In both the years of particularly marked inflationary pressure — 1951 and 1955 — the call on resources by public investors did in fact decline compared with the previous years. In the remaining years there were increases compared with previous years. These were particularly large in

Table III

GROSS FIXED CAPITAL FORMATION BY THE PUBLIC SECTOR IN 1948 PRICES.

£ million.

	1948	1949	1950	1951	1952	1953	1954	1955
Mining	23	29	26	27	33	45	60	60
ernment Research . .	13	14	17	20	25	26	23	26
Elec., & Water . .	138	169	188	189	192	207	238	252
& Communications .	136	154	147	129	122	138	148	163
sing	276	261	258	242	269	313	290	238
al Services	47	65	79	83	82	83	88	90
r Public Services . .	43	45	54	61	58	61	65	64
Total . .	667	737	769	751	781	873	912	893

1949 and 1953 and it is important to note that both these years were years of relative stability and both followed years of very marked deflationary tendencies.

The second allowance we must make is in respect of any trend in the absolute volume of production devoted to public investment. There are three possible ways in which we can do this in order to be able to define more precisely what we mean by public investment acting or not acting as a stabilising magnitude in the economy. Firstly we can argue that if total national production increases by a given proportion in a particular year, then even if public investment increases in absolute amount in this period it could still be said to be deflationary providing its share of total production declined. Secondly we can argue in the same way if the volume of national output devoted to capital creation increases (decreases) from one year to the next but the share of public investment in the total decreases (increases) even though, once again, in absolute volume it may have varied in the same direction as total investment. Or finally we can look at real public investment in isolation from the larger aggregates of either total national production or total national investment and merely argue that any deviation from the trend of public investment represents an inflationary or deflationary influence in the economy.

The first two of these comparisons are undertaken in Table IV.

We can see that the general conclusions derived from the previous analysis in terms of changes in the absolute volume of production used for public investment is confirmed by these comparisons. In the inflationary years of 1951 and 1955 reductions in both the proportion of total production and of total investment absorbed by public investors took place. The fall in the proportion of in-

Table IV

GROSS FIXED CAPITAL FORMATION BY THE PUBLIC SECTOR AS A PROPORTION OF NATIONAL GROSS FIXED CAPITAL FORMATION AND OF GROSS DOMESTIC PRODUCT.

£ million.

	1948	1949	1950	1951	1952	1953	1954	195
Public Gross Fixed Investment in 1948 prices . .	667	737	769	751	781	873	912	8
Gross Domestic Product in 1948 prices	10,835	11,214	11,524	11,970	11,989	12,429	13,006	13,4
National Gross Fixed Investment in 1948 prices.	1,435	1,561	1,643	1,649	1,661	1,837	2,004	2,1
(i) as percent of (ii) . .	6.2 %	6.6 %	6.7 %	6.3 %	6.5 %	7.0 %	7.0 %	6.7
(ii) as percent of (iii) . .	46 %	47 %	47 %	45 %	47 %	48 %	46 %	41

vestible resources used by the public sector from 46 per cent in 1954 to 41 per cent in 1955 is particularly marked.

The comparison of the actual and the trend values of public investment is the final comparison of the aggregates we must make and they are presented in Table V.

Table V

ACTUAL AND TREND VALUES OF GROSS FIXED CAPITAL FORMATION BY THE PUBLIC SECTOR IN 1948 PRICES.

£ million.

	1948	1949	1950	1951	1952	1953	1954	195
Actual	667	737	769	751	781	873	912	89
Trend	681	715	748	781	815	848	881	91
Difference	—14	+22	+21	—30	—34	+25	+31	—2

By this criterion, as by the others, public investment in the crucial inflationary years 1951 and 1955 can be seen to have operated in a stabilising manner. In 1951 it was some 4 per cent below its trend value and in 1955 about 2.5 per cent below.

This initial statistical analysis permits us to conclude, then, that public investment as a whole since the war has been timed in such a way as to increase the stability of the economy. This is true, we have seen, whatever criterion we wish to use for making such a judgement. It is particularly true of the inflationary years 1951 and 1955. In fact it appears that the public investment „tap" has been more easily turned off in such times, either voluntarily or involuntarily, than it has been turned on in the early years of a

deflationary tendency in the economy. For in both 1948 and 1952 public investment was comparatively low, albeit not necessarily as compared with the immediately preceding years, and only in 1949 and 1953 in the second years of the two deflationary periods did it increase significantly either in absolute or relative terms.

However, the favourable pattern we have discovered in this aggregative analysis of public fixed investment could result from one of two distinct phenomena. In the first place it could be the outcome of a general tendency throughout a large part of the public sector for investment to be timed contra-cyclically. Alternatively it could be the result of a large favourable movement by a relatively small part of the whole sector which more than offsets perverse behaviour by the sector in general. The aggregative result could be the same in both cases but whilst the feeling that public investment has behaved unfavourably might, if suitably qualified, be justified if the second situation held, it would not be justified in the former case. We must, therefore, go on to examine the behaviour of different parts of the public sector. This disaggregation can be done in three meaningful ways; firstly according to the type of public body, secondly according to the type of economic

Table VI

GROSS FIXED CAPITAL FORMATION BY TYPE OF PUBLIC SECTOR.

£ million.

	1948	1949	1950	1951	1952	1953	1954	1955
tral Government								
ent Prices	85	91	99	116	131	141	141	164
Prices	85	90	96	102	105	110	111	121
cent of G.D.P.	0.78%	0.80%	5.8%	0.85%	0.87%	0.89%	0.85%	0.90%
cent of Gross Inv.	5.9 %	5.8 %	6.2 %	6.2 %	6.3 %	6.0 %	5.5 %	5.6 %
from Trend.	—0.7	—0.5	+0.7	+1.9	+0.1	+0.3	—3.5	+1.7
al Authorities								
ent Prices	351	376	401	452	535	600	568	524
Prices	351	373	391	386	415	470	449	391
cent of G.D.P.	3.2%	3.3%	3.4%	3.2%	3.5%	3.8%	3.5%	2.9%
cent of Gross Inv.	24.5%	23.9%	24.4%	23.4%	24.9%	25.6%	22.4%	18.1%
from Trend.	—14	—3	+4	—12	+6	+50	+18	—51
lic Corporations								
ent Prices	231	278	292	300	328	377	449	512
Prices	231	275	283	263	262	295	354	379
cent of G.D.P.	2.1%	2.5%	2.5%	2.2%	2.2%	2.4%	2.7%	2.8%
cent of Gross Inv.	16.1%	17.6%	17.2%	15.9%	15.8%	16.1%	17.7%	17.5%
from Trend.	—1	+26	+16	—21	—39	—24	+18	+25

activity and thirdly according to the type of asset purchased. We will deal with each of these in turn.

There are three broad types of public body that we can isolate; firstly the central government departments and their agents such as the regional hospital boards; secondly the local authorities; and thirdly the public corporations. In the following table we make the same statistical analysis for each sector as we have already made for public investment as a whole.

Looking at public corporation investment to begin with we can see that it underwent a most pronounced contra-cyclical movement in 1951. It increased by only £ 8 million in current prices and in terms of all the other indices it exercised a marked deflationary force which is particularly apparent when the trend of real investment expenditure by these corporations is allowed for. However in the subsequent relatively deflationary years and again in 1955 when inflationary forces re-appeared, they merely added fuel to the prevailing forces in the economy. In 1952 their investment in real terms fell albeit by only £ 1 million compared with the previous year. Even in 1953 when the evident time-lag involved in „turning the tap on" should have lapsed, although their investment in real terms increased it was still well below its trend value and failing to secure the average volume of either national product or of national fixed investment that pertained over the whole period. In 1954, however, a very large increase in investment was undertaken by the public corporations and this upward movement persisted, at a reduced rate, in 1955. Thus the inflationary forces of this year were reinforced by this surge of investment by the public corporations. The only indicator which shows any slight decline is that which expresses public corporation investment as a percentage of total fixed investment, indicating, of course, that there was an even greater increase in private fixed investment.

Central government investment has increased fairly steadily and persistently over the period as a whole both in absolute real terms as well as money terms and as a proportion of gross domestic product. Only in 1954 does any appreciable variation occur and this is in sympathy with the general economic climate, rather than acting as a counter-balancing force. What little variation occurs in 1951 and 1955 is also upwards thus failing to act in any small extent as a stabiliser.

From this point of view local authority investment up to 1953 behaved very well, decreasing in absolute and relative importance in 1951 compared with former and subsequent years. It also declined very significantly in 1955 but the significance of this movement is difficult to appraise because it really continued a longer run decline

which began in 1954 and which is not brought out in the trend differences due to the shortness of the whole period.

Whilst in 1951, then, the favourable contra-inflationary movement of aggregate public investment was the joint result of favourable movements by the two major sectors, in 1955 it was the result of a marked unfavourable movement of public corporation investment being more than offset by a very large fall in local authority investment. The same direction of change occurred in these two sectors in 1954 but in that year the increase by the public corporations more than offset the decrease by the local authorities. This suggests that unlike 1951 it would be dangerous to attribute the

Table VII

GROSS FIXED CAPITAL FORMATION BY TYPE OF ECONOMIC ACTIVITY.

£ million.

	1948	1949	1950	1951	1952	1953	1954	1955
nsport								
rent Prices	144	167	166	163	171	195	211	245
8 Prices	144	165	161	143	137	152	166	181
cent of G.D.P.	1.3%	1.5%	1.4%	1.2%	1.1%	1.2%	1.3%	1.3%
cent of Gross Inv.	10 %	11%	10 %	9 %	8 %	8 %	8 %	8 %
. from Trend.	—2	+16	+9	—12	—20	—8	+3	+15
l and Power								
rent Prices	147	181	198	217	247	284	342	386
8 Prices	147	179	192	190	198	222	269	286
cent of G.D.P.	1.3%	1.6%	1.7%	1.6%	1.7%	1.8%	2.1%	2.1%
cent of Gross Inv.	10 %	11 %	12 %	12 %	12 %	12 %	13%	13%
. from Trend.	0	+14	+9	—11	—21	—16	+13	+12
using								
rent Prices	267	263	264	288	352	399	366	318
8 Prices	267	261	258	242	269	313	290	238
cent of G.D.P.	2.5%	2.3%	2.2%	2.0%	2.3%	2.5%	2.2%	1.8%
cent of Gross Inv.	18 %	17 %	16 %	15 %	17 %	17 %	14 %	13%
f. from Trend.	+5	—2	—7	—24	+1	+43	+19	—35
ier Social Services								
rent Prices	72	99	120	143	164	179	183	187
8 Prices	72	98	117	125	131	139	144	139
cent of G.D.P.	0.7%	0.9%	1.0%	1.0%	1.1%	1.1%	1.1%	1.0%
cent of Gross Inv.	5 %	6 %	7 %	8 %	8 %	8 %	7 %	6 %
f. from Trend.	—16	0	+10	+9	+6	+5	0	—14
cellaneous								
rent Prices	37	35	44	57	60	61	56	64
8 Prices	37	35	43	50	48	48	44	47
cent of G.D.P.	0.3%	0.3%	0.4%	0.4%	0.4%	0.4%	0.3%	0.4%
cent of Gross Inv.	3 %	2 %	3 %	3 %	3 %	3 %	2 %	2 %
f. from Trend.	—2	—5	+1	+7	+3	+2	—4	—2

1955 contra-inflationary behaviour of aggregate public investment to a conscious policy of stabilisation. In large measure it was merely the fact that a longer-run change in local authority investment unconnected with the inflationary nature of the economy got into its stride in 1955 and more than offset the adverse movements of other aggregates.

The second breakdown of the public sector — according to type of economic activity — is given in the Table above. The following activities are isolated; housing; other social services; transport (including the Post Office); fuel and power; and miscellaneous activities.

Investment by the first two groups both follow the pattern already outlined for the public corporations: a decline in 1951 with a revival not taking place until 1954 and then a failure to reverse or even to halt this in response to the inflationary pressures of 1955. The group of services in the miscellaneous sector and the social services other than housing reverse this pattern. Whilst the Korean inflation period found investment in these fields increasing in both real and relative terms, in 1955 all the indices show a marked fall. In the case of the miscellaneous group, however, this fall occurred in 1954 and compared with that year, albeit not with previous years, investment in this sector increased in 1955. This can be explained by the fact that the miscellaneous group is dominated by investment in government research activities which decreased in 1954 but increased to the 1953 level the following year. Of all the sectors, housing shows the most consistent contra-cyclical pattern. It is this pattern which, because it accounts for something like two-thirds of total local authority investment, gives rise to the favourable variations of this total. Once again, however, the decline in 1955 really continues the decline which occured in the previous year. Thus it is really a trend movement reflecting the switch from public to private house building is not shown up in the trend figures.

Finally we look at the variations in public investment according to type of asset purchased.

The pattern of public investment demand for the output of the building and construction industry follows closely that of investment in public house construction which accounts for approximately half of the total. The demand fell in 1951 and again in 1955 though as we have already noted this continued the downward movement which commenced in the previous year. These contra-cyclical movements occured in both absolute and relative terms, except that in 1951 the public sector increased its share of the total domestic investment demand upon this part of industry. This implies that whilst public investment demand on this sector behaved in a stabi-

Table VIII

GROSS FIXED CAPITAL FORMATION BY TYPE OF ASSET PURCHASED.

	1948	1949	1950	1951	1952	1953	1954	1955
ding & Works								
rent Prices	422	460	488	544	648	722	704	672
3 Prices	422	458	482	471	510	573	565	515
cent of G.D.P.	3.9%	4.1%	4.2%	3.9%	4.3%	4.6%	4.3%	3.8%
cent of Gross Inv.	29 %	29 %	29 %	29 %	31 %	31 %	28 %	24 %
cent of total Bldg. Wks.	67 %	66 %	65 %	67 %	65 %	61 %	56 %	49 %
from Trend.	—15	+3	+9	—20	+2	+47	+21	—47
s., Ships & Aircraft.								
rent Prices	85	95	91	82	73	81	99	119
3 Prices	85	94	85	67	53	60	74	86
cent of G.D.P.	0.8%	0.8%	0.7%	0.6%	0.4%	0.5%	0.6%	0.6%
cent of Gross Inv.	5.9%	6.0%	5.2%	4.1%	3.2%	3.3%	3.7%	4.0%
cent of total Vehs., hips & Aircraft	32 %	33 %	33 %	30 %	26 %	25 %	28 %	28 %
from Trend.	+2	+13	+6	—10	—21	—12	+4	+18
t and Machinery								
rent Prices	160	190	213	242	273	315	355	409
3 Prices	160	184	203	214	218	244	273	303
cent of G.D.P.	1.5%	1.6%	1.8%	1.8%	1.8%	2.0%	2.1%	2.3%
cent of Gross Inv.	11 %	12 %	12 %	13 %	13 %	13 %	14 %	14 %
cent of total Plant d Machinery	32 %	34 %	34 %	33 %	35 %	39 %	39 %	39 %
from Trend.	+1	+6	+6	—1	—16	—9	+1	+12

lising manner in 1951 it did not do so to the same extent as private investment demand.

Not surprisingly public investment demand for vehicles, ships and aircraft also closely follows the movements of public investment in transport. Thus whilst moving contracyclically in 1951 the downward movement continued into 1952 and the subsequent upward movement dit not gather momentum until 1954 and 1955 in which year the requirements of stability required a fall in demand.

In the case of public investment demand for plant and machinery, little or no deflationary pressure was exerted either in 1951 or in 1955. In 1951 despite the fact that two of the indices show a slight fall, the demand increased in absolute terms and also as a percentage of gross fixed capital formation. The 1951 level of demand was not significantly raised in 1952 and even fell when measured against the trend but from 1953 onwards it continuously increased with no slowing down in the rate of increase in 1955.

In the case of both the demand for vehicles, ships and aircraft and

for plant and machinery the decline in relative and/or absolute terms in 1951 by the public sector of investment was greater than the decline in demand by the private sector of investment. In 1955, however, both sectors seem to have added to the inflationary pressures to the same extent in this respect in so far as the proportions of the total investment demand on the supplies from these two sectors of industry which were absorbed by public investors remained constant from 1954 to 1955 at 28 per cent. and 39 per cent. respectively.

We can see, then, that the favourable behaviour of aggregate public investment in the sense that it has tended to increase the stability of the economy or at least to reduce its instability, is the outcome of forces within the sector as a whole acting in different ways. In summary undoubtedly the major force working towards stability has been the local authority sector with its investment outlays on housing. In 1951 this seems to have been essentially a measure undertaken voluntarily or involuntarily with a view to reducing inflationary pressures. In 1955, however, it merely continued a policy towards a smaller amount of public house building which began to be effective in the previous year. This policy had little to do with increasing the stability of the economy but was taken for much wider political and social reasons though it may have been speeded up by considerations of general economic policy. In 1951 this stabilising influence of public house building activity was supplemented by the public corporations providing fuel, power and transport services. In 1955, however, this major section of the public sector merely aggravated the general inflationary situation by increasing its demands to the same extent as private investors.

This picture is certainly less of an indictment of public investment policy in respect of the very limited problem of its use as a weapon of shortrun economic policy than Harrod has suggested. For 1951 the picture is indeed quite encouraging. But we must not, of course, fly to the opposite extreme in our conclusions. The slowness with which public investment was increased in 1952 and 1953 and the failure of public corporation investment to turn down in 1955 indicate that is has not behaved in the textbook manner. Even the fairly general decrease in public investment in 1951 can be said to have been absurdly small in relation to the needs of the time.

One further point needs to be emphasised. This article has been devoted to an ex-post statistical analysis of the behaviour of public investment. No attempt has been made to look at the problem ex-ante. It is not possible, therefore, to judge whether the actual behaviour was intended or unintended.

LES EFFETS DE L'INVESTISSEMENT PUBLIC DANS LA LUTTE ANTI-CYCLIQUE AU ROYAUME-UNI DEPUIS LA GUERRE

par S. PLEASE

RÉSUMÉ

Economistes et gouvernements considèrent généralement, depuis que KEYNES a publié sa „Théorie Générale" que l'investissement public constitue l'un des moyens les plus souhaitables, les plus efficaces et les plus aisés à manier de stabiliser la Dépense.

Néanmoins c'est une opinion incontestablement fort répandue qui tient que ce genre d'investissement n'a pas réussi, en Angleterre depuis 1945, à remplir cette fonction.

Cet article se propose d'étudier les données statistiques du problème. Il ne faut en aucun cas y voir une tentative pour juger si le volume des investissements publics a été, pour toute la période considérée, trop élevé ou trop bas, par rapport, par exemple, aux investissements privés.

On utilise quatre critères pour effectuer cette analyse. Premièrement les changements dans le volume des investissements publics, en valeur absolue, compte-tenu des changements du niveau des prix. Deuxièment les changements dans la proportion du revenu national absorbée par l'investissement public. Troisièmement les changements dans la proportion d'investissement fixe entreprise par le secteur public. Quatrièmement les variations de l'investissement public, pendant toute la période considérée, par rapport à la tendance générale.

Après avoir fait la part des changements intervenus dans l'étendue du secteur public, à la suite de la nationalisation et dénationalisation de certaines industries, les quatre critères utilisés suggèrent tous que l'investissement public a eu une influence stabilisatrice. En particulier, dans les années d'inflation 1951 et 1955 toutes les mesures prises prouvent que l'investissement public a eu nettement une influence déflationiste; dans l'ensemble il apparait que les vannes de l'investissement public ont été plus faciles à fermer qu'à ouvrir.

Dans la dernière partie de l'article les chiffres de l'investissement public sont décomposés de trois manières différentes, les éléments composants étant à leur tour confrontés aux quatre critères utilisés pour les agrégats, afin d'en évaluer l'influence stabilisatrice.

On distingue donc en premier lieu les investissements du gouvernement central, des autorités locales et des „corporations publiques" (industries nationalisées); en second lieu différents types d'activité économique — transports, énergie, logement et autres services sociaux; et en troisième lieu différents types d'éléments d'actif acquis — bâtiments et entreprises, véhicules, navires et avions, usines et équipement.

Cette analyse montre que la construction de logement par les autorités locales a été la force principale agissant dans le sens d'une plus grande stabilité économique; cependant alors que pendant l'inflation de 1951 venaient s'y ajouter les „corporations publiques" qui fournissaient énergie et transports, en 1955 ce secteur essentiel ne fit qu'aggraver la situation inflationiste générale.

En conclusion l'article insiste sur le fait que si l'analyse statistique s'oppose à la condamnation globale de l'investissement public que l'on entend si fréquemment, il faut examiner celui-ci dans une perspective plus vaste. Notamment, on peut penser que son influence stabilisatrice a été à certains moments tragiquement insuffisante par rapport aux besoins.

FISCAL POLICY IN AN EXPANDING ECONOMY: A CASE STUDY OF PAKISTAN

by A. M. HUQ

INTRODUCTION

The major purpose of this study is to present a systematic analysis of the role of fiscal policy as an instrument of deliberate economic development. The first part of the paper deals with the concept of developmental fiscal policy, the second part with an appraisal of the effectiveness of such a policy with reference to the actual growth experience of a typical underdeveloped country, Pakistan. Fiscal policy, like any other governmental policy, has to be primarily oriented towards the fulfillment of the fundamental social and economic objectives of a country within which it works — an assumption we can safely make in the light of the development of our thinking on the theory of economic policy and the actual historical experience of most of the national economies in the Twentieth Century. Through the evolution of modern governments as a substantial direct consumer of the national product and an equally substantial producer of goods and services and an indirect but decisive regulator of the flow of expenditures into consumption and investment channels, governmental budgetary policy has grown in stature as a powerful mechanism of control over the aggregate level of economic activities through the last few decades. Of course, fiscal policy as well as any other instrument of public policy may also degenerate into a weapon of war, especially designed to enhance the economic and military power of the state, deflect the flow of resources into destructive channels and create an illusion of prosperity under the deceptive foliage of full employment and accelerated rate of economic growth. This is, however, not to minimize the importance of the role of fiscal policy in the process of economic expansion in a typical welfare state, where economic progress is measured in terms of maximum social welfare rather than the differential calculus of power. On the contrary, rational behavior on the part of the social scientist leaves us no other choice but to assume that the key economic objective

of any public policy — and fiscal policy is no exception — is to create conditions most favorable to continued growth and dissemination of the effects of growth to successive layers of society. From this point of view, the concept of functional finance assumes a new significance.

Within this limited range of operations as estrablished by the requirements of the economics of growth and welfare, three broad functions of a positive fiscal policy may be identified for the purpose of analysis: (a) to facilitate the attainment and maintenance of full employment of economic resources with a view to maximizing production; (b) to promote the optimum distribution of the social product, consistent with the requirements for current consumption and net capital formation; (c) to contribute to the creation of an economic environment most conducive to the dynamics of long-term growth. These accepted functions of the fiscal policy which are essentially the by-products of Keynesian economics of employment and post-Keynesian developments in the area of economic dynamics and stability, are most often conceived within the given framework of a mature mixed economy at a relatively advanced stage of industrial development [1]). Of course, historically, the experiences of even the industrially advanced countries have differed considerably in their growth patterns, in priorities among alternative development goals and finally in the widely disparate roles of institutions and organizations, including the government in the process of development [2]). Naturally, generalizations as to the role of fiscal policy would become increasingly more difficult when the analysis is projected to the case of underdeveloped economies. Here the analyst is confronted with an infinite variety which renders any unique theoretical model-building or the application of a set of uniquely determined economic policies an impossi-

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[1]) The literature on Keynesian and post-Keynesian economics is so extensive that only a highly selective bibliography of references may be indicated: J. M. Keynes, *The General Theory of Employment, Interest and Money*, London and New York, 1936; Sir William Beveridge, *Full Employment in a Free Society*, London, 1944; Alvin H. Hansen, *Fiscal Policy and Business Cycles*, New York, 1941; R. F. Harrod, *Towards a Dynamic Economics*, Macmillan Company, 1948; Evsey Domar, *Essays in the Theory of Economic Growth*, New York, 1957.

[2]) Alexander Gerschenkron, "Economic Backwardness in a Historical Perspective", in *The Progress of Underdeveloped Areas*, edited by Bert F. Hoselitz, University of Chicago Press.

bility. On the contrary, a clear recognition of the wide discrepancies in contours of life — social, economic, cultural and political — is likely to prove most fruitful for the appropriate public policies, geared to the needs of a growth-and-welfare conscious backward economy. As Professor Heller has rightly stressed, "Failure to comprehend the nature and significance of these differences could result — in fact, in the past sometimes has resulted — in mistaken and costly transplanting of inappliable experience to the economies of underdeveloped countries" [3]).

Subject to these qualifications, it is pertinent to the present study to inquire more precisely into the role of fiscal policy in the context of the economics of underdevelopment and the guided transition to the economics of expansion.

I. *Fiscal Policy as an Implicit Variable in Fundamental Equations of Growth and Stability*

A survey of contemporary literature on economic dynamics provides a set of fundamental equations in which positive fiscal policy appears as an implicit, yet strategic variable. Take, for instance, the well-known Harrod-Domar model of economic growth: [4])

Warranted Rate of Growth X Capital Requirements = Fraction of Income Saved (Harrod)

Equilibrium Rate of Growth = Marginal Propensity to Save X Average Productivity of Capital (Domar)

Both these identical equations express the necessary conditions for stability and equilibrium for an economy in the process of continuous growth and expansion. The central proposition in this simplified dynamic model is this: the maintenance of a continuous state of growth, measured in real terms, requires that investment

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[3]) Walter W. Heller, *Taxes and Fiscal Policy in Underdeveloped Countries*, United Nations Publication, 1954.

[4]) R. F. Harrod, "An Essay in Dynamic Theory", Economic Journal, March 1939. Evsey Domar, "Expansion and Employment", American Economic Review, March, 1947; "Capital Expansion, Rate of Growth and Employment", Econometrica, April, 1946. For a simplified yet complete version of the Harrod-Domar model, see W. J. Baumol, *Economic Dynamics*, The Macmillan Company, New York, 1951.

and income grow at a constant annual compound rate equal to the product of propensity to save and the average productivity of capital investment. If the two fundamental ratios — the savings-income ratio and the capital-output ratio — are assumed to be constant, the rate at which investment must grow is uniquely determined. If this required rate of growth of investment can be derived empirically, the abstract theory of growth assumes the character of an "operationally meaningful theorem" for fiscal and other instruments of public policy. Within the framework of a free-enterprise economy, this is what we mean by compensatory or developmental fiscal policy [5]). (The discussion is restricted to fiscal policy, without minimizing the importance of other instruments of public policy.)

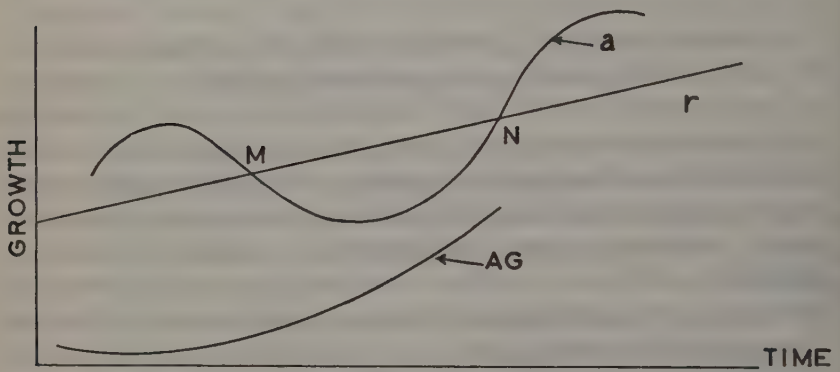

Chart I.
a = actual growth curve
r = desired line of steady advance
AG = accelerated growth curve

In Chart I, the a-curve represents the typical historical growth experience of an expanding economy. Suppose we superimpose the r-line, representing the equation of steady growth as derived from statistical estimates of propensity to save and productivity of capital. The two points of intersection at "M" and "N" represent

[5]) This should be distinguished from orthodox theories of fiscal policy which were primarily concerned with the principles of balanced budget, economy in public expenditure and equity in taxation. Although Professor Hansen is well known for his theory of compensatory fiscal policy, the concept of developmental fiscal policy is implicit in his thesis that fiscal policy is required to offset secular stagnation.

turning-points as deviations from the desired rate of growth during different phases of a typical business cycle. The axioms of compensatory fiscal policy in these two situations are self-evident — expansion of government spending (deficit budgeting) and/or reduction in taxes at "M" and reduction of spending (surplus budgeting) and/or increase in taxes at "N". The objective is to close the recessionary gap at "M" and the expansionary gap at "N" (analogous to the concept of inflationary and deflationary gaps) thereby maintaining the economy on an even keel. This utterly simplified and mechanistic formulation of the compensatory budgetary policy, however, merely serves to express the logic and should not be interpreted as a device to underestimate or conceal the complexities of economic realities. The prescription of policy derived from this rather orthodox theory has to be adapted in the light of actual circumstances. Marginal changes in policy, either in taxation or government expenditure, must be governed by the nature of existing situations, careful evaluation of potential impact of such changes on private consumption and investment, and above all, the degree of flexibility and resilience in the economy, and the measure of autonomous readjustment within the private sector. If, however, the internal economy shows a distinct tendency to rebound to restore the balance between productive capacity and aggregate demand, any drastic change in budgetary policy would be unwarranted and clearly detrimental to the working of a free enterprise economy. It is sometimes argued that "reliance on fiscal policy perpetuates maladjustments and may obscure the need for economic reforms" in times of economic recessions [6]). This argument, however, does not appreciably weaken the case for positive fiscal policy, in view of the fact in the absence of such a policy, there is no guarantee that maladjustments will automatically correct themselves. Past history substantiates this null hypothesis.

The typical situation in an underdeveloped economy presents a more challenging problem for developmental rather than merely compensatory fiscal policy. Here the government is confronted with the doldrums of economic stagnation, prior to the initiation of the industrialization process, characterised by the vicious circle

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6) Arthur Smithies, "Federal Budgeting and Fiscal Policy", in *A Survey of Contemporary Economics*, Vol. I, Edited by Howard S. Ellis, Richard D. Irwin, Inc., Illinois, 1948.

of depressed income, retarded capital formation, the paucity of resources, accentuated by the pressure of rapidly growing population, the inequality of income distribution, resulting in consumption of capital by the poor and dissipation of the same by the rich, lack of indigenous growth of entrepreneurial skill and technology, exposure to the fluctuations of world markets, uncontrollable inflation at home, and a host of other bewildering problems. In this setting, positive fiscal policy assumes a special significance in that its extensive and effective use offers the most encouraging answer to the greatest need of a backward economy: to accelerate the rate of development — a movement along the "AG" curve in Chart I — consistent with the requirements of a stable economy, within the framework of a coordinated public and private system of enterprise.

Given all the data on economic backwardness, an underdeveloped economy needs the creative impulse of the Schumpeterian "innovation" to trigger the initiation of the development process and the logical choice for the innovating agency would be the government which can use its budgetary policies, among other things, as a major technique to accelerate the speed of development, provided the governmental machinery is reasonably stable and efficient. More precisely, policies concerned with governmental revenues and expenditures can be systematically applied to stimulate the development of new resources, new products, new processes, potential markets and better organization of production. Furthermore, through fiscal regulation and inducement, the government can guide the allocation of resources into socially desirable channels, modify the distribution of income to raise the level of consumption and economic welfare, step up the process of capital accumulation and restrain inflation which seem to be the inevitable by-product of the initial development effort, with heavy spending unaccompanied by substantial expansion in output [7]).

It is understandable why the government will have to assume, at least at the earlier stage of development, he strategic role of the innovator. The very definition of underdevelopment implies the existence of potential resources for development. It also implies under-utilization of existing resources. Historical experience of

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[7]) Gerald M. Meier and Robert E. Baldwin, *Economic Development, Theory, History, Policy,* New York, 1957, pages 383-85.

economically advanced countries clearly demonstrates how the basic process of development can largely be interpreted in terms of development of new resources and continuous improvement in the method of utilization of available resources. Despite the vast differences in the patterns of economic, social and cultural characteristics, differences in stages of economic development and retarded growth of technology in backward areas which western writers on underdevelopment seem to over-emphasize, basic development in these stationary economies must proceed along similar lines, so far as the development of resources is concerned.

Development of new resources in most of the underdeveloped countries is a highly promising venture, especially in view of the fact that the impact of modern technology on resources have so far been either inadequate or strongly biased in favor of conventional extractive industries. Technological advances in recent years have created large demand for new resources and have considerably enhanced the resource value of the so-called underdevelopd areas. In the predominantly agrarian older economies, with regard to new agricultural resources, the extent of expansion is limited by the inelasticity of the supply of land and the high degree of specificity of the properties of land. However, it is well known that the effective supply of land is not perfectly inelastic even in the so-called old countries. In the agricultural statistics of some countries, there is a special category of millions of acres of land described as "cultivable waste" which is a potential source of virtually a new resource, capable of being brought to use with considerable amount of non-productive initial investment. Besides, most of the underdeveloped countries which perennially complain about the deficiency in mineral resources hardly went through a process of intensive geological exploration and prospecting, characteristic of the development of the industrially advanced countries. Here again those countries need a type of initial investment which carries no guarantee of immediate returns, yet it has to be considered as an essential prerequisite for industrial development. There are cases in history, e.g. Japan, where the superstructure of modern industrialism was built substantially on the import trade in basic industrial raw materials but such a pattern of industrial development is an exception rather than the rule. Furthermore, similar industrialization process will have to be based on the hypothesis that similar favorable circumstances also synchronize such as the development of an

expanding export potential in international markets or the existence of an imperial economy where the nucleus of a dominant industrial power is surrounded by a periphery of dependent colonies — a hypothesis we can categorically reject, as unrealistic from the point of view of the underdeveloped economies.

Besides new resources, agricultural or mineral, better methods of utilizing existing resources, harnessing potential sources of energy such as hydro-electric power, methods designed to increase productivity of human as well as natural resources, and the development of new uses of existing resources and similar projects offer a most promising approach to development. Here again the problem resolves itself into one of a constant flow of investment without the expectation of immediate return. Industrial research is expensive but indispensable to an expanding economy. In an industrially advanced country, private industry undertakes this onerous responsibility, their willingness to be explained in terms of the instinct for survival in a highly competitive society and their ability in terms of their command over financial resources from internal as well as external sources. In the context of the capital position of underdeveloped countries, and the ability and attitude of private investors, any sizable investment in industrial research is unthinkable. Other projects in the area of social investment such as transportation, communication, irrigation, harbor development, and institutes of technology are types of investment opportunities which will appear most unattractive to private investors, primarily because of the high capital intensity of these projects, the ostensible lack of direct correlation between investment and the rate of return on capital and the existence of quick-yielding less venturesome investment opportunities such as export and import businesses.

It is, therefore, clearly understandable that a substantial portion of developmental finance in these areas of "social capital formation" must be a fiscal responsibility of the government. In view of its enormous potential impact on the rate of economic development in the long run, this type of investment must be given a top priority in the capital budget in any economically backward country. Various ramifications of fiscal policy in this area may be suggested as follows: (1) a system of inducement to potential investors in the form of tax-exemption for interest yields on government bonds issued to finance the development projects and special tax treatment for private investment in industrial research, plus direct subsidi-

zation, and special fiscal incentives for voluntary contributions to nation-building institutions and agencies, (2) inducement to private foreign investors in the form of tax-exemption in the initial stage of exploratory investment facilities for repatriation of capital and earnings and guarantee of full compensation in the event of nationalization, (3) partial liquidation of the public debt, if possible, through income derived from completed projects such as roads, harbors, canals, dams, hydro-electric power, etc., (4) special provisions in the annual finance bills for the automatic approval of recurrent appropriations by successive legislatures for the completion of the projects, which are parts of an over-all development program extending over a number of years.

The first two calls for a clear, irrevocable statement of fiscal-and-industrial policy on the part of the government, the third for the establishment of a development authority and the fourth for a reform of the conventional budgetary process. This is the first approximation to our concept of a positive, developmental fiscal policy.

Besides the development and technical improvement in the utilization of resources, policies dealing with governmental revenues and expenditures may be directed to another tangent of the resource problem: to guide the allocation of existing resources into socially necessary lines of development. In the absence of any autonomous tendency of resources to move into certain pre-determined channels, calculated to meet the requirements for welfare-oriented economic growth, selected use of government expenditure can be made to make resources gravitate towards the desired areas of investment, whereas taxation would have the effect of diverting resources away from lines of development unwarranted by the accepted principles of social and economic policy. It is interesting to note that one of the earliest contributions to the analysis of this type of growth and welfare-oriented fiscal policy was implicit in the famous Marshallian paradox that increasing cost industries should be taxed and decreasing cost industries should be subsidized [8]). Choice of industries for taxation or subsidization, in other words, should be guided by the concepts of marginal social productivity and marginal social costs. Subject to the qualification that strict quantification is an unreasonable demand to make of any process of conceptualization,

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[8]) Alfred Marshall, *Principles of Economics.*

this may be regarded as the first approximation to the welfare version of positive fiscal policy in an expanding economy.

Furthermore, budgetary policies can be effectively used to change the pattern of income distribution according to the principles of social justice. This is one of the areas in welfare economics that involves more than anything else, value judgments rather than quantitative criteria for decision-making on the part of the government. Excessive inequality in income distribution is a social malaisse which is by no means a peculiar characteristic of industrially advanced capitalistic countries alone. In underdeveloped countries, the discrepancy in income strata or wealth ownership is strikingly noticeable.

Here the policy maker is confronted with one of the most difficult dilemmas. Existence of gross inequality in income distribution is repugnant to the concept of social justice. Such inequality can, of course, be reduced through a system of highly progressive income tax, excess profits tax, capital levy, or estate duties or a combination of any of these different forms of taxation plus simultaneous expansion of transfer expenditures such as unemployment benefits, old-age pensions, etc. It is argued that more equitable income distribution is conductive to maximum social welfare. But it has to be noted that a policy of deliberate equalization of income will invariably inhibit the process of capital accumulation and destroy initiative for growth. Obviously, the requirements for maximum social welfare do not exactly coincide with those for the optimum rate of economic growth. This does not necessarily imply an irreconcilable conflict. It is not beyond the range of possibility to formulate a delicately balanced fiscal program which will avoid the pseudo-socialistic goal of a perfectly equitable system of income distribution, maintain a reasonable degree of income inequality yet achieve a limited redistribution of income. This will tend to raise the level of consumption in low income brackets, restrict conspicuous consumption without any adverse effect on the process of capital formation. Exactly what should be the degree of progressivity in the tax structure and the extent of income redistribution will depend on specific circumstances faced by the fiscal authorities and their evaluation of the sensitivity of the domestic economy to marginal changes in fiscal policy. The fiscal machinery, however, should have sufficient built-in flexibility to make it adaptable to changing economic environment.

The operation of positive fiscal policy in underdeveloped regions seems to carry a greater promise in terms of effectiveness in the areas of capital formation and inflation control rather than resource allocation and income distribution [9]).

From the standpoint of economically backward countries, three major processes of capital formation may be distinguished: private investment, financed by voluntary savings or expansion of credit by the banking system, by direct investment from external sources, or by public investment financed by public saving (defined as the excess of total tax and non-tax revenue over current expenditure including cost of administrative services, economic and social services, debt services, defense and miscellaneous expenditures) or budgetary surpluses. It is well known that the rate of private investment — domestic and foreign, relative to the required rate of capital formation to attain any measure of economic development is grossly inadequate in the underdeveloped countries. Even with the inclusion of public investment, the rate of capital formation still leaves a wide gap in the aggregate supply of capital. According to an estimate made by the United Nations Economic Commission for Asia and the Far East, for the region as a whole, with a population of twelve hundred million, excluding Japan and Mainland China, assuming a capital output ratio of 2.5, total annual capital requirement would amount to 5 billion dollars for the moderate development target of 2 per cent rate of annual growth. In the countries in this region, out of the needed 5 billion dollars, the proportion of private and public savings are estimated at 2 billion dollars, less than 1 billion dollars anticipated from external sources so that there still exists a huge investment gap of 2 billion dollars [10]).

Under such circumstances, fiscal authorities in underdeveloped countries have a difficult but indispensable function to perform. Ways and means must be devised to close the gap between the required and the actual rate of capital formation. Fiscal incentives must be provided for the maximum mobilization of domestic private savings and for the promotion of a steady flow of private foreign capital. The system of taxation must be adapted to the needs of an expanding economy. As the development process gains momentum,

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9) Henry S. Bloch, "Economic Development and Public Finance", The Progress of Underdeveloped Areas, op. cit. page 248.

10) United Nations, *Economic Survey of Asia and the Far East*, 1954.

the incremental income must be siphoned off from conspicuous consumption and unproductive investment either through fiscal measures designed to induce greater private savings and investment, or, in the last resort, through direct taxation.

Budgetary surplus on the current or revenue account is a primary domestic source of finance for government development expenditure. One way of securing larger current surpluses which can be transferred to the capital account is to raise additional revenues through improved tax administration and collection and by finding new methods of taxation and new sources of taxable capacity plus a reduction of non-developmental expenditure.

In the initial stage of development, in view of the relative inelasticity of the tax structure and the inflexibility of the current expenditure program, development spending must be financed from public borrowing or budgetary deficits. This method of financing presents a set of formidable problems to the fiscal agencies: first, it may distort the flow of investment funds, attracting them away from the private sector; second, if the government debt is held by the banking system, deficit financing is most likely to generate inflation. Besides monetary expansion, there is an additional ground for inflationary pressure. In the earlier stages of development at low income levels, the propensity to consume is high and output elasticity is low, resulting invariably in a considerable degree of inflation.

So far as the first problem is concerned, there is no easy answer immediately applicable to policy. Indiscriminate use of deficit financing will unquestionably produce social problems worse than economic backwardness. The social cost of development may far outweigh social benefits. Furthermore, it is questionable to what extent economic development at all costs is the acceptable objective of a rational, positive fiscal policy. Careful consideration, therefore, must be given to the possible adverse effects of government borrowing and spending on private investment. It seems that the danger of any deleterious effect of public borrowing in this respect is more apparent than real in an underdeveloped economy. The pattern of private investment is likely to remain more or less unchanged during the initial stage of development, independent of government borrowing. On the contrary, it is more likely that the appearance of a government bond market as a secure, attractive investment opportunity will have the effect of galvanizing the insipid fund of

investable resources that are merely hoarded as idle money. It is not quite often realized that such a fund does exist in most of the underdeveloped countries in the form of gold treasures, and other precious metals or non-interest bearing bank deposits and similar liquid assets. To the extent the government can mobilize this investment fund through a judicious policy of debt management, the effect on the flow of investment in the private sector is not likely to be unfavorable. Funds raised in this manner may actually be used to step up investment in the private sector. Government sponsored development finance corporations may be set up to act as lending agencies to private industries or to joint enterprises (private and public) under the management of specially instituted industrial development corporations.

With regard to the problem of inflation, the answer lies partly in the coordination of the tax policy and the debt policy, partly in the coordination of monetary policy with fiscal policy, to some extent in the choice of criteria for public investment and in the last resort, in direct controls such as rationing, import licensing, etc.

As far as possible, the government should finance its development expenditure by budgetary surpluses which in itself would tend to curb inflation. To the extent deficit financing is inevitable, a balanced investment program, including the development of consumer goods industries, along with heavy industries, is likely to counteract the inflationary pressure. Besides, a moderate degree of inflation may not only be inevitable, but also desirable in an expanding economy.

In addition to purely fiscal measures to combat inflation, "compensatory" monetary policy can also be used to support the government's program of economic stabilization and controlled growth. Historically, monetary policy has proved most effective in pruning off excessive spending and consequently, the inflationary potential during periods of prosperity. There is reason to believe along with the developmental fiscal policy to offset secular stagnation, or to initiate an accelerated movement out of stagnation, whatever the case may be, monetary policy could assume this developmental role, especially as a stabilizing force in a growing economy. In the light of empirical evidence, which has demonstrated differential effectiveness of monetary and fiscal policies as regulatory devices in different phases of the business cycle, a coordination between these two major instruments of policy is what

most economists now advocate as a dependable approach to the basic problem of economic stabilization.

There is another reason justifying a consistent and coordinated framework of monetary and fiscal policy. Developmental fiscal policy, as we have noted before, may generate inflation which in the form of hidden taxation may adversely affect the rate of capital formation, the private cost of production and the social cost of consumption. In a situation of this nature, the monetary authorities have a dual role to play: first, to assist the fiscal authorities to finance the development expenditure, by maintaining orderly conditions in the government security market, and in the capacity of what is known in the literature on central banking as the "banker to the government"; second, to contribute to the stabilization of the aggregate level of economic activities by appropriate policies of monetary restraint or expansion, whatever the prevailing situation might demand.

It would be unrealistic to ignore the possibility of a conflict between the goals of economic growth and economic stability and a lack of coordination betweeen monetary and fiscal policies is likely to widen this area of conflict. As in a full employment economy, the need for such coordination is imperative in an expanding economy. In this context, "the choice of the appropriate mix of the two" becomes a key problem in the formulation of public policies [11]).

II. *The Fiscal System of Pakistan in the Perspective of Economic Backwardness and Expansion*

In the light of the preceding discussion on the concept of developmental fiscal policy, the short historical experience of Pakistan — a relative new-comer among the community of under-

[11]) For an excellent theoretical analysis of interrelationships between government expenditure levels, tax levels and interest rates at high levels of income and employment, see Warren L. Smith, "Monetary-Fiscal Policy and Economic Growth", Quarterly Journal of Economics, February, 1957.

Also, P. A. Samuelson, "The New Look in Tax and Fiscal Policy", *Federal Tax Policy for Economic Growth and Stability*, U.S. Government Printing Office, 1955.

Milton Friedman, "A Monetary and Fiscal Framework for Economic Stability", American Economic Review, June, 1948.

developed nations — presents an interesting case material to test the significance of this simple hypothesis: In a backward economy, developmental fiscal policy is one of the major instruments of accelerated economic growth. As a first approximation, the structural characteristics of the system of fiscal administration in the country must be carefully examined. To what extent is the system adapted to the requirements of an expanding economy? The logical sequence to this line of inquiry would, of course, be first to present and evaluate the actual policies in operation, their impact on the rate of economic development, and the prospects for their effective use in continued expansion.

One of the legacies of the formation of Pakistan in 1947 out of the sub-continent of India was the adoption of the basic structure of federal and provincial finance, as envisaged in the Government of India Act of 1935 under the British administration. Under this system, the fiscal responsibility for the administration of external affairs, defense budget and the development and maintenance of the system of communication were exclusively assigned to the Central Government, with concurrent responsibility in specified areas. It is interesting to note that the provincial governments were to assume the responsibility for the maintenance of law and order, for agriculture, industry and public welfare services, including education, health and other "nation-building" activities. With regard to the sources of government revenue, Central as well as Provincial, the initial tax structure of Pakistan reflected all the complexities associated with a federation — the problems of allocation of responsibility in tax administration as well as distribution of tax revenue which did not necessarily coincide. For instance, there were some taxes which were levied and retained exclusively by the center: customs duties on imports, taxes on income and capital of corporations and receipts from public enterprises such as the railways, postal and telecommunications. Taxes levied and retained exclusively by the provinces included land revenue and irrigation charges, sales taxes, inheritance taxes on agricultural property, agricultural income tax, duties on inland waterways transportation, tolls, special excise duties (on selected items exempted from central excise), taxes on mineral rights and entertainment. In addition to these two broad categories of taxes, revenues from certain other taxes, imposed by the center, formed a divisible pool. The two outstanding cases in this category are the income taxes

and the jute export duty [12]). Lastly, certain taxes were to be levied by the center and the derived revenues to be transferred to the provinces. These included stamp duties on various instruments of credit, terminal taxes on movements of goods and passengers by rail or air, inheritance taxes (except on agricultural property).

Extraordinary circumstances such as influx of millions of refugees from India and the deterioration of relations with India over Kashmir and other issues resulted in mounting rehabilitation and defense expenditure on the part of the central government and brought to a focus the utter inadequacy of the existing tax structure. To further aggravate the financial burden on the government, the flow of revenues from income taxes and corporation taxes, as well as excise duties, was interrupted as a result of the geographical splits between the parent companies and the subsidiaries and between the points of manufacture and points of consumption. According to the established principles, these duties were collected either at the head office of the parent company or at the origin of manufacture.

The initial adjustments in Pakistan's fiscal administration, dictated primarily by the contingencies of the times, took the following forms: (a) new taxes designed to raise an additional revenue of Rs. 101.6 million; (b) temporary suspension of the partial allocation of revenue from income taxes to the provinces; (c) temporary transfer of the sales tax from the provinces to the center; (d) suspension of development grants to the provinces, excluding the subvention to the Northwestern Frontier Province as well as East Bengal's quota in jute export duty; (e) exclusive authority to the Central Government to raise revenues by public borrowing.

These steps undoubtedly mark an improvement in fiscal administration in Pakistan, rendering substantial aid to the government to tide over the financial crisis and to gain a breathing space to consolidate the fiscal structure which was to be confronted with more challenging problems requiring more unorthodox approaches. This may be called the rehabilitation phase of the growth of positive fiscal policy in Pakistan.

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[12]) The terms of the Government of India Act of 1935 relating to income taxes and the jute export duty were re-examined and re-established by the famous "Niemeyer Award" of 1937.

The principle of equity with regard to the allocation of tax revenues which was sacrificed temporarily as an emergency measure was re-established by the Raisman Award. The outlook for central finances brightened in the early 1950's as a result of the impact of the Korean boom in international markets for jute, cotton and wool — Pakistan's major exports. This was reinforced by an increase of tax revenue from import duties which followed the liberalization of domestic import policy. Budgetary surpluses provided a sound basis for a re-appraisal of fiscal needs and resources of the center vis-a-vis the provinces.

Under the Raisman Award, 50 per cent of the net revenue from income taxes was allocated to the provinces (as envisaged in the Government of India Act of 1935) after making allowances for corporation taxes, taxes on federal emoluments, taxes collected in the Federal Capital and the proceeds of any central surcharges. The levy of the sales taxes was permanently transferred to the Central Government, with the provision that the provinces would continue to absorb 50 per cent of the total tax revenue. It was also stipulated that 50 per cent of the net proceeds of the central excise duties on tobacco, betel-nuts and tea would accrue to the provinces partly to compensate for the loss involved in the surrender of the 50 per cent of sales tax revenue to the center. The Award also modified the system of central subventions to the provinces, both raising the level and extending the area of its operation. Without contemplating any fundamental change in the tax structure, it was estimated that the Raisman Award would result in an annual flow of revenues in the neighbourhood of Rs. 64 million, from the Central Government to the provinces.

The question of allocation of tax revenues between the center and provinces, which was so exclusively dealt with in the Raisman Award, was only one of the series of serious questions that have to be raised with regard to the reforms in the fiscal structure of Pakistan. The country has embarked on a comprehensive program of deliberate economic development. The capital requirements for the attainment of the desired rate of economic development, as well as other supplementary resources including entrepreneurial initiative, are substantially beyond the range of the so-called private sector. In this perspective, the question may be raised to what extent has the mechanism of fiscal administration adapted itself to the needs of an expanding economy. More specifically, has the conventional

pattern of government expenditure been modified to conform to the model for development programming? Has the tax structure demonstrated sufficient elasticity, relative to the requirements for continuing economic growth? In other words, is this a fairly reliable hypothesis that Pakistan has attained considerable maturity with regard to the evolution of a positive, developmental fiscal policy? These are some of the questions which cannot be satisfactorily analyzed without reference to the progress of development programming in Pakistan, the estimated capital requirements for development and the changing patterns and process in governmental budgetary policies in the context of actual implementation of the development programmes.

Ever since its establishment, the new administration in Pakistan gave serious consideration to the various issues involving a plan of industrial development and "the formulation of industrial policy calculated to ensure the building up of a sound and healthy economy" [13]). In particular, the role of the center and the provinces in industrial planning and development was re-examined. It may be recalled that under the Government of India Act, 1935, which Pakistan adopted without any substantial amendment, the development of industries was assigned as a function of the provincial governments. This arrangement was clearly recognized as ill-adapted to the requirements of an industrially underdeveloped state such as Pakistan. It was strongly felt that industrial location must be determined by the requirements of balanced regional growth and strategic considerations and as such, the central government was in a better position to set the pace as well as the pattern of industrial development. It is interesting to note that the government unequivocally accepted the theory that "Industrial development is so bound up with fiscal policy that the two must be closely integrated" [14]). The concept of fiscal policy, formulated in this manner, marks the beginning of what may be called the developmental phase of positive fiscal policy in Pakistan.

The outstanding feature of this new approach was the assumption of new financial responsibilities by the government with regard to industrial development, and marked a clear departure from the concept of orthodox finance. In addition to the state ownership and operation of public utilities and defense industries, the government

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[13]) Government of Pakistan, Statement of Industrial Policy, April, 1948.
[14]) Ibid.

proposed to undertake the responsibility of exploring the mineral and energy resources, developing the harbours, extending the irrigation facilities and promoting scientific and industrial research. Also, despite heavy budgetary pressure, it was clearly recognized that taxation policy should, as far as practicable, moderate the burden on new industrial projects with heavy initial investment and low profit margins, which called for preferential tax treatment of those who would participate in the industrial development of the country. More specifically, the following announcement was officially made with regard to tax incentive to industrial growth and capital formation: (a) New industrial undertakings using power-driven machinery and with a work force of more than 50, would, during the initial 5-year period, be exempted from income tax, super-tax and business profit tax on so much of their profits as do not exceed 5 per cent of the capital employed [15]); (b) Concession of special accelerated depreciation allowances of 15 per cent with regard to new buildings and 20 per cent with regard to new plant and machinery in addition to the normal depreciation allowances.

Besides tax incentives for industrial development, the Government of Pakistan assumed the direct responsibility of financing a substantial portion of the planned development expenditure. As a preliminary step to an understanding of this aspect of Pakistan's

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15) The measure of tax relief given to new industries was substantial in view of the heavy incidence of the income tax and the super-tax, as indicated by the following schedule:

Income group	Income Tax	Super Tax
5,000	119	—
6,000	115	—
8,000	295	—
10,000	445	—
15,000	1,008	—
20,000	1,852	—
30,000	4,852	703
50,000	11,102	4,453
100,000	26,727	18,203
500,000	151,727	194,766

Source: F. B. Arnold, Economic and Commercial Conditions in Pakistan, London, 1955, page 53.

fiscal policy, the way the development needs have grown and the extent to which both the structure of public finance and the budgetary process in the country was adapted to the requirements for growth, must be analyzed carefully.

The Pakistan budget is divided into two segments: (a) the Revenue Account and (b) the Capital Account. Revenue expenditure, which includes the cost of civil administration, defense and service of the National Debt is financed from current taxation and other current income. Capital expenditure, including direct capital outlay by the Central Government and development loans to provincial, state and local governments, is financed from surpluses in the revenue budget, recoveries of loans and advances, incomes from state trading schemes, foreign aid and miscellaneous capital receipts.

Table I

REVENUE RECEIPTS AND EXPENDITURE

(in millions of Rs.)

Year	Revenue	Expenditure	Year	Revenue	Expenditure
1948-49	667.6	647.0	1953-54	1,125.0	1,114.9
1949-50	885.4	856.0	1954-55	1,157.0	1,150.1
1950-51	1,273.2	1,266.2	1955-56	1,299.2	1,297.1
1951-52	1,448.4	1,442.3	1956-57	1,302.8	1,327.7
1952-53	1,334.3	1,320.1			

Source: Government of Pakistan, Budget Statements and Explanatory Memorandum and the Demand for Grants.

A steady increase in receipts as well as expenditure is shown in the preceding table. Within the course of a decade both revenue and expenditure have nearly doubled. It should be noted that the gross revenue surpluses were substantially higher than indicated in the above table. The Pakistan Government decided in 1951, to create reserve funds to provide finance for economic development and to make special grants to the provinces for the same purpose. The funds allocated for these purposes form the current surplus in 1950-51 and subsequent years are included in the final figures for expenditure [16]).

[16]) F. B. Arnold, op. cit., page 46.

With the exception of 1956-57 which recorded a budgetary deficit of Rs. 24.9 million in the Revenue account, sizeable budgetary surpluses have been consistently maintained. This steady improvement reflects partly higher taxes resulting from expanding trade and growth of income subject to direct taxation and the application of full customs tariff to India. It should be noted that the revenue budget continued to show a surplus despite liberal concessions granted to new industries [17]).

In addition to growth in size, the revenue structure in Pakistan has undergone considerable modification, primarily in response to the requirements of economic development. Customs duties which used to be predominant source of central revenue have declined in relative importance. In 1948-49, the government derived 49.1 per cent of its total tax revenue from this source, as compared with 32.7 per cent in 1956-57. This can be partly explained in terms of the recession in the export market following the Korean boom, increasing rate of domestic consumption of exportable raw jute and cotton, and partly in terms of the structural changes in import trade which the process of deliberate economic development necessitated. Under the new import policy, preferential treatment in the form of low tariffs was given to development goods such as industrial raw materials, capital equipment and machinery and heavy duties were imposed on luxury commodities, the consumption of which the Government wanted to discourage, and on consumer goods such as textiles, the domestic production of which was expanding. The relative decline in customs revenues was more than offset by simultaneous increase in other tax and non-tax categories of income. An outstanding illustration of this change is reflected in the revenues derived from central excise duties (levied on cotton textiles, gasoline and kerosene, tobacco, cigarettes, sugar, matches, tea, betel-nuts, etc.) which increased from Rs. 53.4 million in 1948-49 to Rs. 138.3 million in 1956-57. Direct taxes on personal and corporation incomes have risen only moderately, mainly as a result of the tax concessions given to incomes arising from new industrial investment to which reference has been made before.

Given the existing set-up of fiscal administration, continued economic expansion would require rising budgetary surpluses on

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17) J. Russell Andrus and Azizali F. Mohammed, op. cit., page 311.

the revenue account to be overflowing into the capital budget, as one of the primary sources of development finance. The tax structure, as indicated above, has shown considerable elasticity, relative to development needs [18]). Further expansion of the tax base, improvement of the administrative machinery for taxation, adaptation of the tax system so as to make it most effective for the implementation of the development program and other allied questions are currently being investigated by the Taxation Enquiry Committee, Government of Pakistan.

With regard to revenue expenditure (current account), the major components being national defense and civil administration, the pattern reflects a downward rigidity in recessionary periods and over the long run, a distinct rising trend. It is most unlikely that this pattern will change in the forseeable period.

It is obvious that budgetary surpluses for development purposes, if at all feasible, must depend on the flexibility of the tax structure. Economic growth will expand taxable capacity, resulting in a widening of the intensive as well as extensive margin of the tax base. Exploitation of this tax potential in an expanding economy without retarding the process of growth itself will continue to challenge the ingenuity of the fiscal authorities of the country.

Table 2

CAPITAL RECEIPTS AND EXPENDITURE,
1948-49 to 1956-57
(In millions of Rs.)

Year	Revenue	Expenditure	Year	Revenue	Expenditure
1948-49	46.8	520.6	1953-54	478.8	790.0
1949-50	214.8	1,064.0	1954-55	356.2	649.2
1950-51	491.4	576.9	1955-56	755.0	986.2
1951-52	407.4	907.0	1956-57	641.9	1,414.7
1952-53	365.5	971.1			

Source: Government of Pakistan, Budget Statements. Also, Statistical Bulletin, Central Statistical Office, Report on Currency and Finance, State Bank of Pakistan.

[18]) For an interesting discussion of the possibilities of rising tax revenues, see Nurul Islam, "Financing Pakistan's First Five-Year Plan", Far Eastern Survey, February, 1957.

Revenues in the capital budget, derived primarily from transfers of surpluses in the revenue budget, recoveries of loans and advances, income from state trading, and external aid, did not increase at the same rate as capital expenditure. This resulted in a recurrent pattern of sizeable deficits in the capital account.

These deficits were financed through a rise in the public debt and the use of government cash balances. The permanent internal debt of the Central Government increased from Rs. 1,350 million in 1954 to Rs. 1,832 million in 1957. The cash balances declined by Rs. 654 million during the decade, 1947 to 1957. This undoubtedly is a reflection of the mounting development expenditures which the Central Government has undertaken, in order to implement the development program.

The Six-Year Development Plan, which was formulated in 1950 at the recommendation of the Commonwealth Consultative Committee on South and Southeast Asia, called for a total capital outlay of Rs. 2,600 million, which including an estimated private investment outlay of Rs. 450 million, were distributed as follows: Rs. 1,200 million from private savings, Rs. 500 million from budgetary surpluses, Rs. 150 million from sterling balances and Rs. 1,200 million from external sources [19]). This proved to be an extremely conservative estimate of the financial requirements for feasible economic development, especially in the light of a series of favorable circumstances in national finance. As the Development Program gained momentum, production targets were revised upwards and a Two-Year Priority Program was drawn up with a distinct accent on the development of heavy industry, mining, fuel and power, transport and communication. During the initial three years (1951-54) alone, the combined Central and Provincial governments' realized development expenditure of Rs. 3.2 billion far exceeded the limits of the entire investment program under the Six-Year Plan [20]). The volume of development expenditure of the Central Government has grown steadily both in absolute magnitude and in proportion, as evident from the following table:

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19) M. L. Qureshi, "Economic Development in Pakistan", *Economic Problems of Underdeveloped Countries in Asia*, edited by B. K. Madan, Oxford University Press, 1953, page 127.

20) A. M. Huq, "Reflections on Economic Planning in Pakistan", Far Eastern Survey, January, 1958.

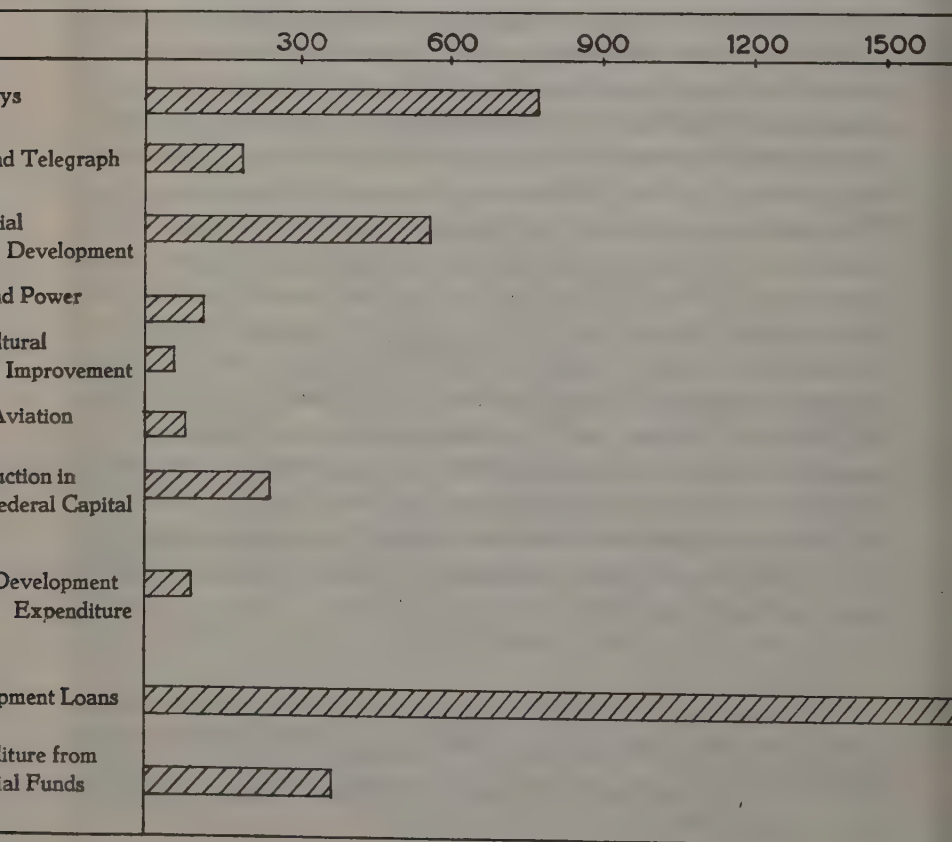
DEVELOPMENTAL CAPITAL OUTLAY OF CENTRAL GOVERNMENT, 1948-49 TO 1956-57

Table 3 (In millions of Rs.)

Year	Total Capital Expenditure Y	Development Expenditure Y	Percentage Y/X
1948-49	520.6	119.7	22.9
1949-50	1,064.0	176.9	16.9
1950-51	576.9	145.2	25.2
1951-52	907.0	284.7	31.4
1952-53	971.1	410.5	42.3
1953-54	790.0	452.2	57.2
1954-55	649.2	544.2	83.8
1955-56	986.2	754.1	76.5
1956-57	1,414.7	968.2	68.5

Source: Government of Pakistan, Budget Statements

OMPOSITION OF DEVELOPMENTAL CAPITAL OUTLAY
ENTRAL GOVERNMENT, 1947-48 TO 1956-57 (In millions of



Source: Government of Pakistan, Budget Statements.

The impressive growth in the size of the capital budget and the preponderent share of economic development in total capital outlay clearly demonstrate the evolution of a developmental fiscal apparatus in a typical backward economy, committed to planned economic expansion. It is interesting to note that in 1956-57, for the first time, the capital budget exceeded the revenue budget by Rs. 87 million which marks a turning point in the progressive development of "unorthodox finance" in Pakistan [21]).

The graphical decomposition of developmental capital outlay (as distinguished from non-developmental capital outlay, such as defense) provide an insight into the principles of investment criteria underlying the concept of positive fiscal policy as it operated in Pakistan. During the ten-year period, 1947-48 to 1956-57, the aggregate direct development outlay of the Central Government added up to Rs. 2,007.1 million, out of which the railroads absorbed the largest share (Rs. 746.9 million), followed by Industrial Development, Fuel and Power projects (Rs. 694.4 million), Post and Telegraph (Rs. 149.5 million), Civil Construction and outlay on the Federal Capital (Rs. 212.8 million) and other miscellaneous projects. In addition to its own outlay on development, the Central Government provided loans and grants to the provincial, state and local governments to supplement their development funds. These disbursements totalled during the same period Rs. 1,540.9 million [22]). Obviously, the concept of "basic development" or the creation of essential pre-requisites for industrial development guided the direction of the government investment program. It may be argued that with regard to their investment decisions, the government was more influenced by the concept of marginal social productivity rather than any mechanistic formula for capital-output ratio, which at the initial stage of economic development merits serious consideration [23]).

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21) For a slightly reprocessed data on development expenditure in Pakistan according to the concepts of budgetary classification, developed by the United Nations, see, Economic Survey of Asia and the Far East, 1955, pages 170-71.

22) J. Russell Andrus and Azizali F. Mohammed, op. cit., page 317.

23) For an excellent analysis of the concept of social marginal productivity of capital as a criterion of investment, see, H. B. Chenery, "The Application of Investment Criteria", Quarterly Journal of Economics, February, 1953. Also, Otto Eckstein, "Investment Criteria for Economic Development and the Theory of Intertemporal Welfare Economics", Quarterly Journal of Economics, February, 1957.

This approach to economic development, with an emphasis on the creation of a favorable pre-industrial environment in the form of an expanding social capital structure, is in sharp contrast with prescriptions of policy that emerge from conventional criteria for investment in an industrial economy. It has been argued that underdeveloped countries should give priority in their investment programs to capital-intensive industries with a highly advanced and complicated technology. This form of investment, it is claimed, will generate the momentum needed to accomplish a break-through from economic stagnation [24]). This argument seems to reflect a lack of understanding of the real problems of capital-scarce, labor-abundant countries at the pre-industrial stage of economic development, where the process of growth will be limited, among other things, by the lack of basic facilities, such as transport and communication, fuel and power, etc. Historically, these factors, associated with the so-called Marshallian external economies, have proved to be essential concomitants of growth in western industrial societies. In the light of their experience, the progress in basic facilities or "social overheads" was, in most cases, an autonomous factor of growth. A typical, underdeveloped country such as Pakistan is in a different situation. Here the decision to accelerate the rate of economic development also involves a program of social investment without which development cannot sustain itself. It is important to note that in the context of economic backwardness, productivity of investment cannot be realistically measured only in terms of rate of returns on capital or incremental capital-output ratio. Equally important consideration has to be given to the intangible but effective contribution that any investment makes to a favorable climate for economic development, by eliminating bottlenecks and sources of external diseconomies.

The criteria for investment and the order of priorities in the re-formulated First Five-Year Plan of Pakistan, were governed by the same logic as in the previous Plan. The implementation of the new program (which will cover the period, 1955-56 to 1959-60)

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[24]) See A. O. Hirschman, "Investment Policies in Underdeveloped Countries", American Economic Review, September, 1957.

Also, Professors W. Galenson and H. Leibenstein, "Investment Criteria, Productivity and Economic Development", Quarterly Journal of Economics, August, 1955.

is estimated to cost Rs. 11.6 billion — Rs. 8 billion in the public sector and 3.6 billion in the private sector. The allocation of public expenditure on development shows a definite bias in favor of expansion of productive capacity and external economies, as evident from the following table:

In addition to the stipulated public development expenditure of Rs. 8 billion, the Pakistan Planning Board indicated that the total private investment, estimated at Rs. 3.6 billion in the fields of industry, transport and housing construction, would substantially speed up the rate of growth. The Government planned to guide private investment into desirable channels within the general layout of the overall Plan, through appropriate monetary, fiscal and commercial policies. In fact, in the area of fiscal policy, tax incentives to encourage desirable investments in the private sector were not only continued, but also expanded and liberalized. Several

Table 4.

PATTERN OF PUBLIC EXPENDITURE ON DEVELOPMENT, 1955-60

(In million Rs.)

Sectors	Expenditure Total	Distribution Percentage
Community development	243	3.0
Agricultural development	886	10.9
Industry (including fuels and minerals)	1,076	13.2
Water and Power development	2,601	32.0
Transport and Communication	1,642	20.2
Housing and Settlements	771	9.5
Education and Training	581	7.1
Health	287	3.5
Labor and Employment	16	0.2
Social Welfare	33	0.4
Reserves	1,100	—
Total	9,236	100.0
Probable shortfall	1,236	
Estimated net expenditure	8,000	

Source: Government of Pakistan, Planning Board, The First Five-Year Plan, 1955-60, page 9.

new concessions were granted. The period of tax exemption for new industrial enterprises was extended from five to eight years. Initial depreciation allowances for tax purposes were raised from 20 to 25 per cent [25]).

With regard to total resources available for the financing of the Government's Rs. 8 billion development budget during the five-year period, 1955-60, it was estimated that public saving will contribute Rs. 1.5 billion or 19 per cent; foreign grants and loans, Rs. 3.8 billion or 47 per cent; and the balance of Rs. 2.7 billion or 34 per cent was the projected share of the private sector, representing the "excess of private saving over internally-financed private investment" [26]). The utilization of private savings for financing the Government's development expenditure was considered to be an essential feature of the Plan. It was justified on three grounds: first, the process of economic development at the initial stage imposed the burden of expenditure heavily on the Government; second, the level of private autonomous investment was estimated to be substantially below the level of potential saving; third, the absorption of the unused margin of saving into the development expenditure program of the Government would be less inflationary than the increased liquidity in the private sector [27]).

The Plan envisaged primarily two methods for the mobilization of available private savings: (a) through an increase in provident funds (comparable to social security contributions), postal savings, postal life insurance, sale of land and assets held by the Pakistan Industrial Development Corporation and repayment of advances to private borrowers; and (b) increase in permanent and floating debt (deficit financing proper). The first method being clearly anti-inflationary is not subject to any serious criticism. The second method raises one of the most perplexing problems of developmental fiscal policy: the price repercussions of deficit financing.

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[25]) United Nations, Economic Survey of Asia and the Far East, 1955, page 170.

[26]) Government of Pakistan, The First Five-Year Plan (Draft) Volume I, page 152.

[27]) This somewhat paradoxical argument, advanced by the Planning Board, is inconsistent with the theory of inflation, without the qualification that the new income generated by public development-expenditure will be matched by the release of real resources available for current consumption. The assumption of such unitary output-elasticity of public development expenditure was unrealistic, especially in view of the fact that a substantical portion of total outlay was admittedly for the expansion of "social overhead capital".

As in the case of the old-fashioned quantity theory of money, the relationship between deficit financing and inflation cannot be stated precisely without a number of qualifying assumptions. Before any acceptable functional relationship between these two variables may be established, inquiries must be made into the composition of the ownership of the public debt, the degree of bank expansion of credit, the effect of government borrowing on the relative proportion between the transaction demand and asset demand for money, the extent of the output effect of the use of borrowed funds, and finally, the strength of the countervailing forces, policies and extraneous circumstances. In the case of Pakistan, most of the expansion of the internal debt (permanent and floating) took place through government borrowing from the banking system and as such, ordinarily would have exerted a serious inflationary pressure, through credit expansion. As a matter of fact, the appreciable rise in money supply since the middle of 1955 may be partly attributed to the absorption of the substantial portion of the public debt by the banking system [28]). However, during the same period, the policy of maintaining budgetary surpluses on the revenue account [29]), increase in government cash balances by withdrawing excess purchasing power from the private sector, state trading schemes to ensure uninterrupted distribution of consumption goods, substantial inflow of external aid-goods, and expansion of domestic industrial production, acted as powerful "counterveiling forces" to offset inflationary pressure [30]). On balance, with a reasonable degree of accuracy, the following conclusions may be reached: (a) Under the special circumstances prevailing in Pakistan, deficit financing had to be an integral part of developmental fiscal policy; (b) The inflationary impact of deficit financing was dampened by the co-existence of a number of favorable factors.

The above survey of the evolution of a positive fiscal policy, extent of its growth and the magnitude of its problems still leaves one major question unsettled — the measure of effectiveness of such a policy relative to the actual rate of economic growth of the country. For the period 1949-50 to 1955-56, estimates of national

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28) See, State Bank of Pakistan, Report on Currency and Finance, 1954-55.

29) On the possibility of larger budgetary surpluses from economy in non-developmental expenditure, see, Government of Pakistan, Economic Appraisal Committee's Report, 1953, pages 150-53.

30) United Nations, Economic Survey of Asia and the Far East, 1955, page 166.

income at constant prices show very moderate rate of expansion in sharp contrast with the movement of the index of industrial production as indicated below:

Table 5.

ESTIMATES OF NATIONAL INCOME AT CONSTANT PRICES
(1949-50 to 1952-53 = 100)
AND INDEX OF INDUSTRIAL PRODUCTION
(1950 = 100)

Year	National Income (in billions of Rs.)	Industrial Production
1949-50	17.2	—
1950-51	18.3	100
1951-52	18.2	125
1952-53	18.5	160
1953-54	19.4	235
1954-55	19.9	285
1955-56	19.5	358

Source: Pakistan Statistical Yearbook. Also, Explanatory Memorandum on the Budget of the Government of Pakistan.

In the light of the preceding analysis, it is understandable why expansion in government development expenditure could not be expected to result in any appreciable increase in national income. This is no reflection on the effectiveness of fiscal policy. On the contrary, the true test of effectiveness would be in terms of the number of capital projects completed, the area of new land brought under cultivation through additional irrigation facilities, the increase in the output of hydro-electric and thermal power, new sources of energy, and substantial improvements and expansion in highways, railroads, ports, harbours, and construction-areas where the development funds have mainly flowed. In this respect, the Government had succeeded in laying the foundation of an expanding economy. A multitude of formidable problems still plague the country. Nevertheless, in the perspective of actual performance, there is unquestionably some reasonable basis for qualified optimism towards the growth potential of the country.

POLITIQUE FINANCIERE DANS UNE ECONOMIE EN EXPANSION ETUDE D'UN CAS: LE PAKISTAN

par A. M. HUQ

RÉSUMÉ

Ceci est l'étude du concept de politique financière active en se référant à son application au processus de la croissance économique au Pakistan. Pendant les dernières déciennies, la politique budgétaire a gagné en importance en tant que conséquence d'une participation accrue du gouvernement dans les activités économiques. Ceci a inauguré une nouvelle phase dans l'évolution de la politique financière active comme instrument du développement économique planifié. Dans les équations fondamentales du modèle de croissance économique de Harrod-Domar, on doit considérer la politique financière comme une variable implicite mais stratégique. Un taux de croissance garanti ou d'équilibre ne peut être maintenu dans une économie de libre entreprise, indépendante des opérations financières du governement.

Le rôle de la politique financière n'est pas moindre dans une économie sous-développée que dans une économie développée. Au contraire, le retard économique offre au pouvoir un défi à relever. Dans les débuts du développement, l'Etat doit assumer le rôle d'un „innovateur" Schumpeterien et doit appliquer systematiquement une politique des mesures budgétaires pour stimuler le développement de nouvelles ressources, de nouveaux procédés, de marchés potentiels et une meilleure organisation de la production. De plus, les instruments de la politique financière peuvent être prévus pour stimuler la formation de capital, réfréner l'inflation et amener une répartition socialement souhaitable des revenus. Naturellement, une fraction substantielle des fonds d'investissement devra être dirigée vers le vaste champ de la formation du capital social qui comprendra transports, communications, irrigation, ports et tout ce qui est nécessaire préalablement à un développement industriel.

Cependant, on doit se rappeler qu'un conflit peut surgir entre le but de la croissance économique et le but de la stabilité économique. La conviction de l'auteur est que de tels conflits ne sont pas inso-

lubles, surtout s'il existe une coordination appropriée entre la politique financière et la politique monétaire.

Pendant la dernière décennie, au Pakistan, la réorganisation du système financier et l'évolution progressive d'une politique financière orientée vers le développement reflètent une nette compréhension du rôle de la politique financière dans la planification de l'économie. A ses débuts, le Pakistan hérita de la structure de base de finances fédérales et provinciales telles qu'elles étaient conçues dans le „Government of India Act" de 1935. L'indépendance et ses conséquences, y compris la lourde charge de la réintégration des réfugiés et les dépenses de la défense nationale ont vivement fait ressortir les insuffisances et les imperfections du système financier existant. Les premiers aménagements dans l'administration financière du Pakistan comprirent essentiellement une redistribution de revenus entre le centre et les provinces et une prise de position extrêmement autoritaire du gouvernement central pour créer de nouveaux impôts et disposer de nouveaux revenus provenant d'emprunts publics. C'est ce qu'on peut nommer phase d'assainissement de la politique financière active du Pakistan.

Le pays a inauguré un programme étendu de développement économique organisé. Ceci a soulevé la question fondamentale de l'adaptation du mécanisme financier aux besoins d'une économie en expansion. Le programme des dépenses publiques doit être modifié pour être adapté au modèle du programme de développement. La politique fiscale doit présenter l'élasticité suffisante exigée par les besoins d'une croissance économique continue. Il est intéressant de noter que le gouvernement a nettement adopté la théorie énonçant que „le développement industriel est si intimement lié à la politique financière qu'ils doivent tous deux être étroitement intégrés". La conception de la politique financière ainsi énoncée marque le début de ce qu'on peut appeler la phase de développement d'une politique financière active au Pakistan.

Le caractère saillant de cette approche nouvelle fut que le gouvernement assuma de nouvelles responsabilités financièrs en ce qui concerne le développement industriel. Ceci marqua clairement une rupture avec la finance orthodoxe. Outre la possession et le fonctionnement des services publics et des industriels de la défense, le gouvernement s'est proposé d'assumer la charge de prospection de minerais, et de sources d'énergie, de développement de ports, de travaux d'irrigation, de recherche scientifique et industrielle. Ainsi

en dépit d'une forte pression budgétaire, on a nettement reconnu que la politique fiscale devait, autant que possible, en modérer la charge sur les industries récentes grevées de lourds investissemente initiaux et de faibles marges de profit. Des dégrèvements furent consentis pour une fiscalité en faveur de ceux qui contribueraient par certaines activités au développement industriel du pays.

Outre les encouragements fiscaux en faveur d'un tel développement, le gouvernement du Pakistan entreprit de financer directement une grande partie des dépenses de développement prévu. A peu d'exceptions près, les dépenses en capital faites par le gouvernement central se sont fortement accrues pendant la dernière décennie. La croissance du budget en capital plus forte comparée à celle du budget en revenus et la part prépondérante du développement économique dans les dépenses totales en capital démontrent clairement l'importance croissante de la politique financière dans le plan d'expansion économique du Pakistan.

Logiquement, la question se posera de savoir jusqu'à quel point la politique financière du Pakistan s'est montrée efficace dans l'accélération de la croissance économique. Pour la période 1949-50 à 1955-56, l'estimation du revenu national en prix constants n'a révélé qu'un taux très modéré d'expansion. Ceci ne doit pas cependant être interprété comme l'indice de l'inefficacité de la politique financière. Il n'était pas prévu que les dépenses publiques en principe affectées au „développement de base" dussent se traduire en accroissement sensible du revenu national. Au contraire, au stade initial de l'industrialisation, le gouvernement estima que la création du capital social était une absolue priorité, en dépit du taux inférieur de rendement à court terme du capital. Envisageant l'avenir de l'expérience actuelle, on éprouve le sentiment de confiance que, passé le stade d'établissement solide des bases pré-industrielles, l'économie du Pakistan connaîtra une expansion rapide dans laquelle une politique financière active continuera de jouer le rôle principal.

INDIRECT AND DIRECT TAXATION IN AN EXPORT ECONOMY: A CASE STUDY OF THE REPUBLIC OF THE SUDAN

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The purpose of this article is to examine the advantages of indirect taxation in an agricultural export-import economy like that of the Sudan. An attempt will be made to show that the present system of taxation, based predominantly on import duties, is equitable, administratively efficient and compatible with the social and economic structure of the country. It will be argued that direct taxation, represented by personal income tax, which is likely to be introduced in the country in the near future, possesses none of these advantages. [1]) Thus the main theme of this study is to juxtapose the two kinds of taxation in question in the economic and social environment typical to the Sudan.

Since the opening of the famous 'Gezira Scheme' in 1925 the most outstanding feature of the economy of the Sudan has been, on the one hand, its dependence on exports of cotton; exports have been the main generating force of the national income. On the other hand, the country has heavily relied on imports for the supply of consumption goods; imports have therefore represented the main leakage from the stream of the national income. [2])

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[1]) It is, of course, not suggested that the personal income tax will completely supersede the present system of indirect taxation.

[2]) For studies of 'dependent economies' similar to that of the Sudan see, inter alia:

Wallich, H. C., Monetary Problems of an Export Economy — the Cuban Experience, 1914—1944, Harvard University Press, Cambridge, Massachusetts (1950), chs. 1, XII and XV in particular; Wallich H. C., and Adler, J. H., Public Finance in a Developing Country — El Salvador — A Case Study, Harvard University Press, Cambridge, Massachusetts (1951), passim; Simkin, G. G. F., The Instability of a Dependent Economy, Oxford University Press (1951); Newlyn W. T. and Rowan D. C., Money and Banking in British Colonial Africa, Oxford, Clarendon Press (1954), pp. 4 ff.

See also Kubinski Z. M., The Great Depression in an Export Economy —

The primary industries in the Sudan produce mainly cotton and gum arabic for exports and some staple foodstuffs of which the most important is durra (a kind of millet) which constitutes the basic diet of low-income natives of the country. The growth of secondary industries — canning and processing of meat, beer, cigarettes, sweets, soft drinks, soap, furniture, glass and knitwear, etc. — has been fairly steady but their present contribution to the supply of consumers' goods is by no means qualitatively or quantitatively very significant. Hence there are on the home market but few substitutes for imports, particularly manufactures.

It may be of interest to note that a large sector of the economy — about one-third in terms of population — is self-sufficient in its economic needs. The largest single group of this sector are the Nilotic tribes of the Southern Sudan.

The revenue from direct taxes,[3]) that is, from Business Profit Tax, Ushur,[4]) Poll Tax,[5]) Tribute,[6]) House Tax, Land Tax,[7])

A Case Study of the Sudan, Public Finance (1958), Vol. XIII, No. 1, and Board of Trade Report of the United Kingdom Trade Mission to Egypt, the Sudan and Ethiopia, London, H.M.S.O. (1955), p. 225.

[3]) The assessment and collection of these taxes requires a personal contact between the tax-collector and the tax-payer. Hence they are classified as 'direct'. But, admittedly, the money incidence of some of these taxes can be shifted forward or backward — thus to this extent they are 'indirect' Taxes.

[4]) Imposed under the Taxation of Rain Lands (Ushur) Ordinance, 1924. Ushur (tithe) is a tax on crops grown on land watered periodically by rain or river on which no land tax or rent in lieu of land tax is levied. It originated from the Moslem Zakat (according to Mohammedan theory, the revenue of a Mohammedan State falls into two classes — religious and secular revenues. The former is derived from the Moslems and is chiefly made up of the so-called 'zakat' taxes, of which there are, for practical purposes, three kinds — zakat of flocks and herds, zakat of commercial capital, and zakat of agricultural produce — or tithe) and amounts to one-tenth of the crop on which it is imposed. The rates of this tax are fixed with regard to the trend of local market values each season and for each kind of crop. They vary not only as between provinces but also as between districts, the proximity of the bigger centres of population or the railway and other local conditions being considerations to be borne in mind in addition to market values. The assessment of the tax is laborious, entailing as it does inspection of all ripening crops by assessment boards composed of selected native authorities, who estimate areas and yields and record the figures on lists against the names of the cultivators. The individual crop assessments provided by these lists are translated by district headquarters into cash assessments by application of the approved rates. The tax is then collected in money.

Date Tax, [8]) and Animal Tax has always represented a small proportion of the total revenue from taxation while the corresponding revenue from indirect taxation, viz. Custom Duties, Royalties [9]) and Sugar Monopoly has been large. Table I shows the relevant statistics for the financial years 1943—1952/3.

The considerable weight of indirect taxes — particularly import duties — in the structure of taxation in the Sudan has several important advantages.

1. *Administrative.* The large area of the country (967,500 sq.-miles) is sparsely populated (estimated population of 11.5 million) and illiteracy is the rule rather than the exception. It follows that collecting taxes by means of indirect measures leads to economy of cost and to administrative efficiency.

2. *Structural.* As the demand for consumption goods is predominantly satisfied through imports, import duties represent a convenient, easy and effective (no possibility of evasion) method of

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[5]) Imposed under 'The Hut and Poll Tax Ordinance, 1925'.

This tax is imposed at flat rates per adult male. It is almost entirely restricted to the Southern Sudan, and was introduced in lieu of cultivation and animal taxes as being more suitable to the primitive conditions of the people concerned.

[6]) Imposed under 'The Tribute Ordinance, 1925'.

Prior to 1934 tribute was paid only in lightly administered districts in order to maintain the importance and sense of responsibility of the heads of backward tribes. Since that date, however, tribute was been used to assimilate ushur, animal tax and poll tax, or a combination of these, on a collective basis.

[7]) Imposed under 'The Taxation of Land and Date Trees Ordinance, 1925'.

This tax was adopted immediately after the re-conquest of the Sudan as a cultivation tax on land other than land dependent on rainfall and was at first confined to Dongola (Northern Sudan). Today Land Tax is applied in two ways:

(1) A tax on the potential value of the land without regard to what crops may or may not have been produced.

(2) As a corresponding tax to 'ushur' (see footnote 4 above) on rain-land, by assessing the actual gross value of the crops produced and assuming that the tax is a fixed percentage of such gross value, the fixed percentage decreasing as the expenditure necessary to each form of cultivation increases.

[8]) Imposed under 'The Taxation of Land and Date Trees Ordinance, 1925'.

This tax is applied only in the Northern Province and it is imposed at a maximum rate per annum on the owner or co-owner of every male date-tree which has reached the flowering state and of every female tree which has begun to bear fruit.

[9]) Imposed under the Royalties Ordinance of 1939. Royalties are levied on gum, tobacco, 'dom' palm fruits, timber, charcoal and firewood. Of these the gum royalty is the most important and is paid in cash upon export.

REVENUE OF THE CENTRAL GOVERNMENT FROM DIRECT AND INDIRECT TAXES [1]

£ E,000 (Rounded figures)

	1943	1944	1945	1946	1947	1948	1949	1950/1 [2]	1951/2	1952/3
1. *Direct Taxes.*										
a. Business Profit Tax	237.9	320.6	425.2	334.6	488.4	463.9	864.8	650.9	323.1	162.3
b. Ushur	59.4	33.2	15.6	30.8	21.2	17.5	17.1	51.7	31.9	26.2
c. Poll Tax and Tribute	121,4	126.3	125.5	138.7	164.1	256.4	270.1	553.1	219.6	216.7
d. Taxes on Property [3]	165.1	163.3	142.4	140.3	665.1	788.3	855.0	134.7 [3]	78.2	91.0
Total Indirect Taxes:	583.8	643.4	708.7	644.4	1339.0	1526.1	2007.0	1380.4	652.8	496.5
2. *Indirect Taxes.*										
a. Customs	1129.4	1247.6	1387.9	2137.4	2991.9	4406.3	5908.9	15896.7	15861.3	12606.8
b. Royalties	177.3	138.1	225.1	351.0	371.3	491.1	620.9	1696.7	1428.3	1390.4
c. Sugar Monopoly [4]	127.9	551.1	665.6	600.0	279.1	747.7	843.7	836.4	— [4]	1561.3
Total Indirect Taxes:	1434.6	1936.8	2278.6	3088.4	3672.3	5645.1	7373.5	18429.8	17289.6	15558.5
Total Revenue from All Taxes:	2018.4	2580.2	2987.3	3732.8	4981.3	7171.2	9380.5	19810.2	17942.4	16055.0
Direct Taxes as percentage of total revenue from taxation:	28.9	24.9	23.7	17.3	26.9	21.3	21.4	7.0	3.7	3.1
Indirect taxes as percentage of total revenue from taxation:	71.1	75.1	76.3	82.7	73.1	78.7	78.6	93.0	96.3	96.9
Total Revenue from all sources [5] (including taxation)	5861.0	6578.0	7763.0	8288.0	10141.0	15650.0	19172.0	41867.0	46299.0	30295.0
Direct taxes as percentage of total revenue from all sources	9.9	9.8	9.1	7.8	13.2	9.7	10.4	3.9	1.4	1.6
Indirect taxes as percentage of total revenue from all sources	24.5	29.4	29.3	37.2	35.9	36.1	38.4	44.0	37.3	51.3

Source of Statistics: Sudan Government Accounts.
Sudan Government Budget Notes.
Sudan Government, Deputy Financial Secretary, Statistical Information, 1925—1950 (Ministry of Finance, Khartoum).

taxing consumers' expenditure. The same consideration applies to the indirect taxing of the consumption of sugar by the Sugar Monopoly. It appears, therefore, that these taxes operate as a pseudo 'expenditure tax' and, to use Kaldor's expression, they tax consumers "according to the amount which they take out of the common pool, and not according to what they put into it". [10])

3. *Social.* It will be shown later that import duties, as compared with the personal income tax, do not interfere with the economically necessary system of family-group transfers thus leaving undisturbed the most prominent feature of the pattern of social structure of the community.

4. *Equity.* Import duties are more equitable than the personal income tax. It will be discussed anon, that the latter could not be made equitable since the value of transfers from personal incomes

[10]) An Expenditure Tax, N. Kaldor, Allen and Unwin (1955), p. 53.

NOTES TABLE I

[1]) Owing to a considerable delay in publication of official statistics at the time of preparation of this study no data were available for financial years following the year 1953.

[2]) The beginning of the financial year since 1951 has been the 1st of July; for years prior to 1950 it had been the 1st of January. This change was introduced in order to co-ordinate the closing of the financial year with the end of the cotton sales. The year 1950/51 covers eighteen months.
In 1950 the values of exports of cotton were unusually high owing to an increase in demand for and price of cotton on international markets due to the Korean War. Exports of cotton affect the revenue of the Central Government both from direct and indirect taxes through their influence on the level of national income and general economic activity. But this effect is delayed. The author estimated the following regression equation for the influence of exports on the revenue of the Central Government for the period 1925—1953.

$$\text{Log } R = 0.676 \text{ Log } \frac{X_{n+(n-1)}}{2} + 0.197 \text{ Log } M_n - 0.028;$$

where R stands for the Revenue of the Central Government; X — exports (values) and M — imports (values).
See Kubinski, Z.M., Loc. cit., Statistical Appendix.

[3]) Land, house, animal and date taxes. Since 1950 a considerable proportion of revenue from these taxes has been devolved to the revenue of Local Authorities.

[4]) Since 1919 the imports and distribution of sugar have been controlled by the Government. In 1951/2 the Sugar Monopoly made no contribution to the revenue of the Central Government.

[5]) The Sudan Government derives a considerable proportion of total revenue from commercial enterprises of which the most important are the following: —
The Gezira Irrigation Scheme, Kassala Cotton Scheme, Tokar Cotton Scheme, Government Pumping Schemes, Ginning factories, Railways and Steamers and Sudan Airways.

in the system of family-group assistance is not capable of a satisfactory assessment.

5. *Political.* Collecting taxes by means of indirect methods has also political advantages. In the Sudan the majority of population, owing to their illiteracy, are ignorant of the necessity for public revenue and the benefits accruing to the community from public expenditures. Hence collecting taxes by direct measures creates ill-feeling between the taxpayer and the tax-collector. Moreover, it is open to corruption and violence. [11])

Indirect taxes are, however, subject to two important criticisms, viz., they disturb the pattern of consumers' expenditure and they are regressive with respect to incomes.

It may not be unreasonable to suggest that the first criticism above does not apply to any significant extent to import duties in the Sudan.

The distributional effects of import duties on consumers' expen-

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[11]) In the Sudan the collection of direct taxes had, in fairly recent past, been associated with extremes of corruption and violence. "Gordon, immediately he landed at Khartoum North towards the end of ... (Mohammed Ali's regime) ... in February, 1884, made a bonfire of the tax-gatherers' books, and his action is sufficient indication either of the system of taxation in force or of the methods of assessment and collection at the time." Tunley, H.A.L., 'Revenue from Land and Crops' in *Agriculture in the Sudan* (Todhill J. D. Editor), London, Oxford University Press (1954), p. 198.

The period of the Mahdi's and Khalifa's regimes (1885—1895) was again one of oppressive taxes. It is of interest to note that Khalifa taxed population by means of currency depreciation. See, inter alia:

Slatin R. C., Fire and Sword in the Sudan (translated by Wingate F. R.), E. Arnold, London (1896), pp. 407, 538-543; Theobald, A. B., The Mahdiya — A History of the Anglo-Egyptian Sudan, 1881—1899, Longman, Green & Co., London (1951), pp. 181-183; Job, H. S., 'The Coinage of the Mahdi and Khalifa', Sudan Notes and Records, The Sudan Printing Press, Khartoum (1920) Vol. III, pp. 163-195; Wingate, F. R., Mahdism and the Egyptian Sudan, London, Macmillian & Co. (1891), pp. 599 and 600.

When the present system of taxation was devised for the Sudan after the re-conquest of the country by Lord Kitchener in 1895, the Earl of Cromer laid down two cardinal precepts viz., firstly, "the low (direct) taxation should be the keystone of the political arch: it brings tranquility in its strain" (brackets inserted — Annual Report by the Governor-General, H.M.S.O., London, 1904, p. 16) and, it is of interest to note, that second, "in the assessment and collection of taxes, no innovation based on western ideas should be introduced unless its introduction is altogether unavoidable" (Ibid). See also The Earl of Cromer, Modern Egypt, MacMillian & Co. (1908), vol. II, p. 550.

ditures depend, in the first place, on the degree of substitution between imported and domestically produced articles. But in the Sudan there are on the home market virtually no substitutes for the majority of imported consumer goods. Although no estimates are available for the Sudan of the degree of price substitution between imported and domestically produced consumer goods, it is most likely low. Estimates of the degree of this substitution for countries in which there are available on the home market good and plentiful substitutes for imports yielded results suggesting that it is low. [12])

Secondly, consumers' pattern of expenditure may be disturbed by differential rates of import duties, discriminating in favour of imports from a particular source of supply abroad. These effects, in the case of the Sudan, are again not likely to be important because, on the one hand, the use of preferential rates so far has been on a very limited scale, [13]) and, on the other hand, there are no a priori reasons to believe that these preferential rates cause large shifts as between different sources of supply from abroad. Estimates of price 'elasticity of substitution' between different sources of supply of similar commodities for countries other than the Sudan suggest that the value of this 'elasticity' is, on the whole, low.

The second criticism against indirect taxes, that is, that they are regressive, will now be examined. A measure of the burden of the money incidence of import duties in the Sudan on various levels of income was estimated for this purpose.

The calculations were based on the statistical information contained in the 1950 budget enquiry in the Sudan by the Department

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[12]) See, inter alia: —

Brown A. J., 'Fundamental Elasticities in International Trade', Oxford Studies in the Price Mechanism (Ed. Wilson T. and Andrews P. W. S.), 1951, pp. 91-106.

Morgan D. J. and Corlett W. J., 'The Influence of Price in International Trade', Journal of Royal Statistical Society, 1951, p. 308 ff.

Harberger A. C., 'Some Evidence of the International Price Mechanism', The Journal of Political Economy, 1951, vol. LXV, No. 6.

Kubinski Z. M., 'Measurements of Elasticity of Substitution in International Trade', The South African Journal of Economics, 1954, Vol. 22, No. 2.

[13]) Under Condominium Agreement of 1899, the Sudan had been until 1956, precluded from applying preferential duties to goods coming from any foreign country except Egypt — imports from Egypt had been and still are permitted to enter the Sudan duty free.

of Economics and Trade, Khartoum (to be referred to as 'Budget Study'). [14] This survey was made among the government employees living in the 'Three Towns', that is Khartoum, Khartoum North and Omdurman. Thus it refers to a particular class of population and, to this extent, the conclusions obtained below are not applicable to all the population of the country. The different groups of incomes studied are listed below together with their characteristics.

GROUP 1.		Symbol-used
Low-income Sudanese unclassified staff [1])		
Non-householders:	Single	1P
		2Q
	Married	3Q
Householders:	Single	4Q
		5Q
	Married	6Q
		7R
		8S
		9T
GROUP 2.		
High-income Sudanese Classified staff [2])		
Non-householders:	Single	1A
		2B
Householders:	Single	3C
	Married	4C
		5D
		6E
		7F
		8G
GROUP 3.		
British Persons [3])		
Alle single persons		1B
All married persons		2BB
Married persons		3B
		4B
Married persons with 2 children		5B
Married persons with 1 child		6B

1) Budget Study, Appendix B.
2) Ditto, Appendix A.
3) Ditto, Appendix C. All British persons rent Government houses.

14) The New Cost of Living Indices, McCorquodale & Co. (Sudan) Ltd.

Table II below shows gross incomes, various expenditures from gross incomes and the burden of money incidence on gross incomes. [15])

Table III below gives various expenditures out of gross incomes as percentages of corresponding gross incomes, money incidence of import duties on expenditures as percentages of corresponding expenditures and expenditures on imported consumption goods as percentages of expenditures on all consumption goods, that is, domestically produced and imported.

It will be noted that incomes in Table III are given in ascending order to facilitate the interpretation of statistics.

It is unfortunate that various income levels lack homogeneity. As shown on page 323, the incomes investigated are of single persons, of married families, of householders and of non-householders. Moreover, expenditures of British persons reflect tastes somewhat different from those of Sudanese.

It should also be noted that due to lack of relevant statistics, the expenditure on consumers' capital goods such as cars, washing machines, etc., has not been incorporated into the calculations of the results shown in Table III. This consideration should be borne in mind particularly in interpretation of the burden of money incidence of import duties on incomes. In the Sudan all consumers' capital goods are taxed when imported. Hence the money burden of customs on these imports may, in some cases, be quite large. It may not be unreasonable to suggest that this burden falls more heavily on high incomes than on low ones.

It is seen from Table III, 1., that the expenditure on goods and services represents a high percentage of gross incomes of Sudanese. With the exception of incomes 7F and 8G — the two highest incomes in this group — this percentage never falls below 90 while for relatively low incomes it is higher. The following reasons can be given as explanations of this high 'income propensity to consume goods and services': —

(a) Incomes of Sudanese are in general low.

(b) The presence of Europeans in the Sudan has influenced the expenditure patterns of Sudanese. As a result Sudanese demand

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[15]) See Appendix I for assumption and adjustments which were made in the course of calculation of figures shown in Table II.

Table II

£ EGYPTIAN (ROUNDED) ANNUAL FIGURES.

	Group 1								
	1P	2Q	3Q	4Q	5R	6Q	7R	8S	9T
1. Gross Income [1])	60.2	96.9	117.8	152.4	208.3	139.4	206.1	255.0	328.3
2. Expenditures on Goods and Services [2])	60.1	93.8	112.6	148.6	197.7	135.6	196.6	240.2	302.3
3. Expenditure on consumption goods (domestically produced and imported) [3])	49.1	77.1	91.7	110.0	150.0	101.8	148.6	177.5	220.0
4. Expenditure on imported goods [4])	19.9	32.4	38.5	42.9	60.4	38.4	60.1	72.5	90.0
5. Money incidence of import duties [5])	2.27	3.70	4.46	5.94	8.48	5.52	8.16	9.82	11.86

	Group 2							
	1A	2B	3C	4C	5D	6E	7F	8G
1. Gross Income [1])	116.8	178.4	241.2	247.8	333.0	473.2	684.1	1,075.0
2. Expenditure on Goods and Services [6])	111.3	167.2	226.4	230.5	306.9	430.6	612.0	904.8
3. Expenditure on consumption goods (domestically produced and imported) [7])	92.9	142.3	159.1	159.0	209.6	297.5	432.1	610.7
4. Expenditure on imported goods [4])	43.9	66.7	54.4	55.5	82.2	132.5	195.2	269.8
5. Money incidence of import duties [5])	6.37	9.74	9.36	9.64	11.94	24.61	43.04	63.37

	Group 3					
	1B	2BB	3B	4B	5B	6B
1. Gross Income [8])	1,039	1,422	1,622	1,101	1,478	1,249
2. Expenditure on Goods and Services [9])	596.0	788.0	87[illegible]	672.0	829.0	779.0
3. Expenditure on consumption goods (domestically produced and imported) [7])	384.4	569.7	44[illegible]	368.2	436.0	424.0
4. Expenditure on imported goods [4])	278.3	296.0	324.[illegible]	256.4	304.8	304.3
5. Money incidence of import duties [5])	85.48	76.66	86.67	64.64	72.36	85.00

European clothing, tobacco, drinks, kitchen utensils, etc. (The same applies to consumption of consumers' capital goods). It appears that for some time the country has been undergoing a period of 'stocking up' with European commodities which are being increasingly used by Sudanese.

(c) The factor of prestige in expenditure. In the Sudan this factor is strongly operative.

(d) This tendency is stimulated by the system of family-group transfers, to be discussed anon.

The above considerations apply also to expenditures on goods

NOTES TABLE II

1) Gross income includes basic salary, cost of living allowance and other income, that is, income partly derived from outside work; partly, (in the case of householders) from contributions to household expenses by other members of the households and, partly, from a notional amount put in to represent income on capital invested in the house (p. 16 of the 'Budget Survey').

The distribution of incomes is as follows: —

(a) Contributions to household expenses (nonhouseholders only).
(b) Expenditure on consumer goods and services.
(c) Cash payments to dependents.
(d) Provident Fund.
(e) Savings which for householders consist largely of repayment of money borrowed for building a house.

2) This heading includes (a) contributions to household expenses (non-householders only) — See also Appendix I, Group I; (b) food; (c) tobacco; (d) light, water and fuel (householders only); (e) clothing; (f) servants' wages (incomes 8S and 9T only); (g) toilet requisites and drugs; (h) cleaning materials; (i) crockery and eating utensils; (j) draperies, linen and blankets; (k) net cost of journey to work; (l) school fees — all incomes but 1P and 3Q; (m) amusements; (n) rent, rates and taxes (householders only — include municipal rates and house tax) and (o) miscellaneous.

3) This heading includes the following items: —
Foodstuffs, tobacco, crockery and eating utensils, cleaning materials, toilet requisites and drugs, draperies, linen and blankets and clothing.

4) See the appropriate section of Appendix II, A and B.

5) See the appropriate section of Appendix III, A and B.

6) In addition to the items listed under 2 above, this heading also includes expenditure on 'Wines and Spirits' (incomes 6E, 7F and 8G) and on petrol (7F and 8G).

7) As 3 above but this heading also includes expenditure on 'wines and spirits' and on petrol.

8) Gross income includes basic salary, cost of living allowance, other government allowances, earnings of wife (when applicable) and unearned (net). Incomes of British persons are distributed as follow: — Expenditure on school bills in U.K., other expenditure in U.K., expenditure on consumers' goods in the Sudan, Pension or Provident Fund and savings.

9) Expenditure of British persons is on consumers goods and services in the Sudan only — it does not include expenditure during the annual leave (normally three months). Items which are additional to those of the Sudanese expenditure are: — club subscription, hospital, dentist and doctors' fees, unkeep of horses and telephone bill.

Table III

PERCENTAGES

	1P	2Q	1A	3Q	6Q	4Q	2B
. Expenditure on Goods and Services as percentage of Gross Income.	99.8	96.8	95.3	95.6	97.3	97.5	93.7
. Expenditure on consumption goods domestically produced and imported as percentage of Gross Income.	81.6	80.2	80.4	77.8	73.1	72.8	79.8
. Expenditure on imported consumption goods as percentage of Gross Income.	31.7	33.4	37.5	32.6	27.5	28.1	37.4
. Expenditure on imported consumption goods as percentage of expenditure on consumption goods (domestically produced and imported).	38.9	41.7	46.7	41.9	37.7	38.6	46.8
. Money incidence of Import Duties as percentage of expenditure on imported consumption goods.	11.9	11.4	24.5	11.6	14.3	13.8	14.6
. Money incidence of Import Duties as percentage of expenditure on consumption goods (domestically produced and imported).	4.6	4.8	6.8	4.9	5.4	5.3	6.8
. Money incidence of Import Duties as percentage of expenditure on goods and services.	3.8	3.9	5.7	4.0	4.1	4.0	5.8
. Money incidence of Import Duties as percentages of Gross Income.	3.7	3.8	5.4	3.8	3.9	3.9	5.4

	7R	5R	3C	4C	8S	9T	5D	6E	7F	1B	8G
	95.4	94.9	93.8	93.0	94.2	92.1	92.1	91.0	89.0	57.3	84.1
	72.1	72.0	65.9	64.1	69.6	67.0	62.9	62.8	63.1	37.2	56.8
	29.1	29.0	22.6	22.4	28.4	27.4	24.7	28.0	28.5	26.8	25.1
	40.0	42.6	34.2	34.9	40.8	40.9	39.2	44.5	45.1	72.3	44.2
	13.6	14.0	17.2	17.3	13.5	13.2	14.5	18.6	22.0	30.7	23.8
	5.5	5.7	5.8	6.1	5.5	5.4	5.7	8.3	9.9	22.2	10.4
	4.1	4.3	4.1	4.2	4.1	3.9	3.9	5.7	7.0	14.3	7.0
	3.9	4.0	3.8	3.9	3.8	3.6	3.5	5.2	6.3	8.2	6.0

	4B	6B	2BB	5B	3B
	61.0	62.3	55.4	56.1	53.9
	33.4	33.9	40.1	29.5	27.6
	23.3	24.3	20.8	20.6	20.0
	69.6	71.7	51.9	69.9	72.6
	25.2	27.9	25.8	23.7	26.6
	17.5	20.4	13.4	16.6	19.4
	9.6	9.8	9.7	8.7	9.9
	5.9	6.8	5.4	4.9	5.3

only, the appropriate percentages for which are shown in Table III 2. It is seen that this propensity is high for low incomes but that it decreases gradually as incomes increase.

It is interesting to note that both average propensities rapidly decrease for British Incomes. It is suggested that this fact may be explained in terms of the following factors: —

(a) Absence of the prestige factor in expenditure.
(b) Absence of family-group obligations.
(c) British incomes are as a whole considerably higher than Sudanese incomes.
(d) British represent a 'Western' group of incomes characterised by developed saving habits — this by no means can be said of Sudanese income-earners.

A measure of dependence on imports for the supply of consumption goods at different levels of income is given in Table III 3. The relevant percentages slowly decrease as incomes increase. Percentages shown in Table III 4, throw further light on this dependence.

Percentages given in Table III 5. show that the burden of money incidence of import duties increases as expenditure on imported consumption goods increases. Similarly with the expenditure on consumption goods (domestically produced and imported — Table III 6.) and that on goods and services (Table III 7.).

Moreover, the percentages in Table III 8. show a certain degree of progression over the whole range of incomes suggesting that the money burden of import duties in the Sudan on gross incomes is by no means regressive.[16])

To summarise, two important conclusions emerge from the statistical study of the burden of import duties in the Sudan: —

(a) They perform the function of a progressive 'expenditure tax'.
(b) They are progressive with respect to gross incomes.

A further extension of the study of the burden of money incidence of import duties on expenditures and incomes was implemented by means of regression analysis. The results of this analysis are given in Table IV below.

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[16]) It was not possible to incorporate into calculations the burden of the money incidence of indirect taxation on expenditure on sugar imposed by the Sugar Monopoly because no statistics of the 'tax content' in the price of sugar were available.

Table IV

REGRESSION EQUATIONS

Y — Gross Income
M_i — Money incidence of Import Duties
E_{gs} — Expenditure on goods and services
E_c — Expenditure on consumption goods (domestically produced and imported)
E_m — Expenditure in imported consumption goods.

	Coefficient of Correlation
1. $\text{Log } E_{gs} = 0.808 \text{ Log } Y + 0.406$	.990
2. $\text{Log } E_c = 0.683 \text{ Log } Y + 0.569$	.976
3. $\text{Log } E_m = 0.866 \text{ Log } Y - 0.227$	.991
4. $\text{Log } E_m = 1.128 \text{ Log } E_c - 0.834$	.976
5. $\text{Log } M_i = 1.321 \text{ Log } E_m - 1.400$	.995
6. $\text{Log } M_i = 1.606 \text{ Log } E_c - 2.495$	.961
7. $\text{Log } M_i = 1.382 \text{ Log } E_{gs} - 2.191$	.980
8. $\text{Log } M_i = 1.149 \text{ Log } Y - 1.714$	.984

It is seen that all correlation coefficients are above ø.9, some very high indeed, suggesting very close association between movements of respective pairs of variables.[17])

According to the values of regression coefficients obtained it is seen that changes in expenditure on imported consumption goods are more sensitive to changes in gross income than those of expenditures on goods and services and on consumption goods. Thus a 1 % increase in gross income brings about .86 % increase in expenditure on imported consumption goods.

According to equation 4 a 1 % increase in expenditure on consumption goods brings about a larger percent increase (1.2 %) in expenditure on imported consumption goods.

Equations 5-8 supply statistical evidence on the problem of distribution of the burden of money incidence of import duties on relevant expenditures and gross incomes. All correlation coefficients are very high and the corresponding regression coefficients are above 1. It is seen from equation 5 that a given proportional increase in expenditure on imported goods is accompanied by a greater pro-

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17) All correlation coefficients are significant according to R. A. Fisher's 'Tables of Significant Values for r, R, and t' in his Statistical Methods for Research Workers.

portional increase in the money incidence of import duties. In view of the nature of statistical evidence supplied by equations 6 and 7 it appears that the money incidence of import duties varies progressively with increases in consumers' expenditure.

Of particular interest, of course, is equation 8 which suggests that the money incidence of import duties varies progressively with increases in the gross income, but it is seen, that the degree of progression is slight.

The remainder of this article will be devoted to an examination of the problem of personal income tax in the economic and social environment of the Sudan.

An introduction of this tax would require an assessment of (a) the gross income receipts, (b) the cost of earning gross income which when deducted from (a) would give (c) the net income receipts, and finally, (d) allowances for personal circumstances of the individual income-earner which when deducted from (c) would give the income tax liability, that is, the 'taxable' income.

The separation of income receipts from capital receipts would not be an easy matter. This is due to the fact that in the Sudanese economy the prevalent factor is the small entrepreneur — industrial, commercial or agricultural — who employs, as a rule, his own capital. More often than not he keeps no accounts whatsoever. [18])

The assessment of the cost of earning gross income is not of paramount importance. In 'Western' communities the system of personal income tax often does not give an adequate allowance for, or entirely ignores this cost in the assessment of the 'taxable' income. The reasons for this procedure are obvious.

It is, however, the estimation of the allowances for personal circumstances which would present a formidable problem and it is in this context that the scope for interpersonal inequities is very great indeed. The Sudanese income-earner has multifarious financial obligations towards a large number of near and far relatives. These obligations are dictated by the requirements of social tradition, economic environment and religious prescripts. And they differ

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[18]) See, inter alia: Prest, A. R. and Steward I. G., The National Income of Nigeria 1950—51, Department of Applied Economics, University of Cambridge (1953), pp. 4 and 5; Hicks, U. K., Public Finance, Cambridge Economic Handbooks, Nisbet & Co. Ltd. (1955), p. 180; Newlyn, W. T. and Rowan D. C., op. cit., p. 209.

widely both in their nature and scope from financial obligations on account of the family in a 'Western' society which, being easily assessable, constitute a convenient and fair base for calculation of personal allowances. [19])

In the Sudan the financial obligations on account of family consist of regular and substantial transfers of incomes to members of the family to which the income-earner belongs.

The family system is widespread and deeply rooted in all Moslem and African communities. It is based on mutual assistance among members of the same family and performs an economically necessary function of providing for the needs of the old, invalid, unemployed, infirm and poor. It resembles, to some extent, the system of social insurance and welfare services administered by Governments or private enterprise in 'Western' countries. Pension schemes and insurance against unemployment and accident are in the Sudan at present available only to employees of larger private firms and to certain income groups in Government employment. But the large majority of the population does not benefit from any such schemes.

In the Sudan the size of the family, according to 'Western' standards, is usually large. In fact, when dealing with the Sudanese community it is more appropriate to speak of the 'family-group' which includes also the family in the 'Western' meaning of this word, that is, near relatives, Thus, a family-group embraces a large number of relatives, some of whom, according to 'Western' standards, are either remotely related to the income-earner or not related at all. But not so in the Sudanese community where the family comprises people related not only by bonds of blood but also by age (age groups) and common geographical origin. Again the number of children in a typical Sudanese family — monogamy in the Sudan is a fairly frequent occurence — is large. Table V shows

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19) "Further problems arise in the concept of disposable income for although direct Tax obligations are a small percentage of total income for most Africans this does not mean that most of their incomes are freely disposable". (Prest and Steward, op. cit., p. 5), and ... "where business transactions and personal transactions are inextricably mixed and where the writ of tribal convention runs as strongly as that of the Government tax collector, the concept of disposable income as a whole and, a fortiori, an individual's disposable income must inevitably be shadowy and ill-defined." (Ibid).

Table V

1. Average number of wives.
2. Average number of children.
3. Average number of dependents living in households.
4. Average number of dependents living outside households.
5. Total average number of dependents (1 and 2) — near relatives — 'western' family.
6. Total average number of dependents (3 and 4) — far relatives.
7. Total average number of all dependents (1—4) — 'Family Group'.

Sudanese Unclassified Staff

	1P	2Q	3Q	4Q	5R	6Q	7R	8S	9T
1.	—	—	1.1	—	—	1.0	1.0	1.1	1.1
2.	—	—	2.0	—	—	3.0	3.6	4.1	5.3
3.	—	—	—	5.6	6.0	1.0	1.1	1.4	1.2
4.	n.a.	n.a.	n.a.	0.4	0.2	0.7	0.7	0.7	1.8
5.	—	—	3.1	—	—	4.0	4.6	5.2	6.4
6.	—	—	—	6.0	6.2	1.7	1.8	2.1	3.0
7.	—	—	3.1	6.0	6.2	5.7	6.4	7.3	9.4

Sudanese Classified Staff

	1A	2B	3C	4C	5D	6E	7F	8G
1.	—	—	—	1.2	1.0	1.0	1.0	1.0
2.	—	—	—	2.3	3.2	4.9	5.3	5.6
3.	—	—	—	1.7	1.9	1.8	1.7	1.9
4	n.a.	n.a.	n.a.	1.1	1.2	1.5	1.8	2.1
5.	—	—	—	3.5	4.2	5.9	6.3	6.6
6.	—	—	—	2.8	3.1	3.3	3.5	4.0
7.	—	—	—	6.3	7.3	9.2	9.8	10.6

British Persons

	1B	2BB	3B	4B	5B	6B
2.	—	1.6	1.9	1.2	2.0	1.0

Source: The New Cost of Living Indices op. cit., pp. 15, 21 and 27.

statistics of dependents of the income-earners included in the 'Budget Study'. Some relevant statistics are given for the British persons for the sake of comparison.

Although the primary beneficiaries of family-group assistance are, so it appears, genuinely needy relatives, a member of the family-group earning an income sufficient for his support is not, ipso facto, excluded from it; his comparatively richer relative will help him financially or in kind.

The obligations of an individual towards his family-group may take various forms as follow: —

1. Loans (more often than not ex-ante bad debts).
2. Grants and gifts.
3. Board and lodging.
4. Lending of transport means and implements of work.
5. Miscellaneous contributions, pecuniary or in kind, for example, to family ceremonies on occassions of weddings, funerals and religious festivities.

It is seen from the above that the pattern of expenditure of an income-earner in the Sudanese community differs from that of his counterpart in a 'Western' society. Admittedly also in the latter society the tradition of pecuniary or in kind assistance to near-family relatives exists but it is not important because of the existence of social insurance schemes, different social and ethical traditions which regard members of family other than the nearest family as financially unconnected with the income-earner and, finally, relatively better general economic conditions which make it reasonably easy for anyone to attain financial independence.

In the Sudanese community the various items of transfer of income on account of the famil system most likely represent a large proportion of incomes received. [20]) Unfortunately no adequate statistical evidence is available in this respect. But some statistics concerning this matter are given in the 'Budget Survey' and they are reproduced in Table VI below.

It is important to bear in mind that the figures in question do not include assistance in kind to the family-group which, most likely, exceed substantially the cash payments. It is of interest to note that

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[20]) According to Prest and Steward the transfers, within family-groups must be "enormous" (op. cit., p. 5).

Table VI

CASH PAYMENTS TO DEPENDENTS AND SAVINGS AS PERCENTAGE OF GROSS INCOME.

Sudanese Unclassified Staff

	1P	2Q	3Q	4Q	5R	6Q	7R	8S	9T
Cash Payments to dependents	Nil	0.5	1.3	2.3	3.7	2.2	3.3	3.4	3.9
Savings [1])	Nil	2.7	3.1	Nil	0.3	0.3	0.6	1.2	1.8

Sudanese Classified Staff

	1A	2B	3C	4C	5D	6E	7F	8G
Cash Payments to dependents	1.8	3.0	2.6	3.5	3.9	4.5	5.2	6.4
Savings	0.4	0.5	1.5	1.5	1.8	2.2	3.1	6.7

British Persons

	1B	2BB	3B	4B	5B	6B
Savings	14.2	10.9	11.1	10.6	11.2	10.3

[1]) Savings of householders consist very largely of repayment of money borrowed for building a house.

Source: The New Cost of Living Indices, op. cit., pp. 16, 22 and 27.

the percentages in Table VI referring to cash payments to dependents increase over the whole range of incomes. This is a suggestion that the burden of family-group assistance increases in progression with increases in gross incomes and that therefore an individual's contributional capacity to the family-group depends directly on the level of his income.

The equitability of the personal income tax in 'Western' countries depends to a large extent on deductions from the gross incomes of allowances for personal circumstances. Accordingly, if this advantage of the income tax is to be preserved in the Sudanese community, all family-group transfers (both in cash and in kind) ought, on the one hand, to be allowed in the assessment of the 'taxable' income

of the income-earners who make these transfers and, on the other hand, they should be added to incomes of those who receive these transfers. Admittedly, the second requirement above is of no import because transfers are normally received by people who earn either no income at all or very low incomes which, most likely, would be exempt from the personal income tax.

A personal income tax not allowing for these transfers would cause great hardship as it would severely discriminate against the firmly established family system the desirability of which in view of the social and economic conditions at present obtaining in the Sudan is unquestionable. This effect of the personal income tax may be conveniently referred to as 'social structure' effect.

In the light of the above discussion family-group transfers appear as a form of a 'pseudo' income tax imposed on the individual income-earner by the society. In fact, it results in a system of 'taxes' and 'grants'; the size and the allocation of transfers being in the last resort decided upon by the income-earner at his discretion. This form of 'tax-cum-grant' system has effects on incentives to work and on savings.

As suggested above, the level of income appears to be a determinant of the amount of transfers. Thus a rich individual, other things being equal (the degree of his social and religious consciousness, his generosity, the requirements of his own immediate family, etc.) receives and grants a greater number of claims on assistance than a poor one. [21]) It is possible that, on the one hand, the expectation of increasing transfers concurrent on higher income acts as a deterrant to earning this income. But on the other hand, the more effective assistance to the family-group yields a greater social prestige value and a greater satisfaction from fulfilment of religious requirements and thus may act as an incentive to work.

It is equally impossible to be more conclusive than above insofar as the behaviour, in this respect, of individuals who receive family-group grants is concerned. The fact that poorer members of the family groups rely on continual assistance of their richer relatives especially in a case of indiscriminate and generous assistance, may discourage enterprise and effort and encourage idleness. But here again generalisations are risky because the personal pride and desire for financial independence may modify this effect.

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21) See also Newlyn and Rowan, op. cit. p. 208.

Again family-group transfers influence the propensity to save of both the income-earner who makes them and of those who receive them. On the one hand, these transfers which probably represent a fairly constant proportion of a given level of income, at least in the short run, reduce the propensity to save of the individual who makes them. On the other hand, there is but little doubt that grants received by members of the family-group are entirely spent; the recipients either have no income of their own or these are insufficient to cope with their expenditure. Finally, in the very long run, the expectations of benefits of the family system affect adversely present savings. The above considerations apply to cash payments; assistance in kind may bring about similar effects.

Hence the family-group transfers as a whole appear to be, apart from the low level of incomes in general in the Sudan and the concomitant high propensity to consume, responsible for the conspicuously low level of savings (see Table VI). Family transfers are, in fact, transfers of money from people who perhaps would save it otherwise to people with high propensity to consume. It may not be unreasonable to suggest that for the community as a whole the amount of family transfers is a broad measure of potential savings. If a personal income tax were introduced in the Sudan it would even further depress the present meagre flow of savings.[22])

Hitherto it has been argued that family-group transfers would have to be allowed for in computation of the 'taxable' income for the purpose of the personal income tax. The assessment of family transfers, however, would be a matter of considerable difficulty. This assistance, as indicated above, takes the form of both assistance in kind and in money and, therefore, its evaluation by the income-earner himself, let alone the Taxation Office, would present formidable difficulties. Moreover, in the circumstances the scope for evasion and corruption would be practically unlimited.

So far some aspects of the assessment of the 'taxable' income has been discussed. But the evaluation of gross income earned would also present difficulties. Records of incomes are readily available only for all Government employees and those of larger Sudanese and expatriate commercial and industrial concerns. It therefore

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[22]) See Nurkse R., Problems of Capital Formation in Underdeveloped Countries, Oxford, Basil Blackwell (1953), pp. 145 and 146. Nurkse suggested, "for the sake of incentives to save" in underdeveloped countries taxation on expenditure instead of on personal incomes. (Ibid. p. 146).

appears that the income tax would cover but a very limited number of incomes.

The machinery of assessing gross incomes earned and allowances and collection of proceeds would require an army of experienced administrators. Qualified clerical staff has always been in short supply in undeveloped countries. Again, the cost of this tax to the Government would be high. In a country with a strikingly illiterate population sparsely occupying a very large area the cost of direct taxes of whatever nature is, as a matter of rule, high. Finally, it is unlikely that the income tax would bring in a substantial revenue. As indicated above, firstly the number of incomes subject to it would be very limited and, secondly, the scope for evasion would be great.

It is seen that the equitability, high-revenue yield and low cost of the personal income tax which are such outstanding features of this tax in developed countries, could not be attained in the Sudan which is characterised by social and economic environment entirely of its own. It seems that this tax if introduced in the Sudan would simply be yet another example of hasty copying of 'Western' practices in entirely unsuitable conditions..

APPENDIX I

It was necessary to make the following adjustments and assumptions in the course of calculations. —

GROUP 1 — *Low-income Sudanese.*

a) No statistics of expenditure on foodstuffs were available for incomes 1P, 2Q and 3Q; instead, their contributions to general household expenses were given. The weight of expenditure on foodstuffs of 4Q was used to compute the required expenditure of 1P and 2Q, and that of 6Q for 3Q.
b) The same procedure was used to estimate the expenditure of 1P, 2Q and 3Q on cleaning materials.
c) No separate statistics of expenditure on tobacco (this was included in expenditure on foodstuffs) were available for 4Q — 9T. But the weight of expenditure on tobacco in total expenditure on foodstuffs was available for the 'representative' income of this group, viz., 4Q (p. 7 of the 'Budget Survey') and this was used to estimate the required expenditure.

GROUP 2 — *High-income Sudanese.*

a) No separate statistics of expenditure on foodstuffs (this expenditure was included in contributions to household expenses) were available for 1A and 2B. The weight of expenditure on foodstuffs of 3C was used to estimate the required expenditures.
b) No separate statistics of expenditure on tobacco (this was included in expenditure on foodstuffs) were available for groups 1A and 2B. But the weight of this expenditure in the expenditure on foodstuffs was given for the 'representative' income 4D (p. 5 of the 'Budget Survey') and this was used to estimate the required expenditure.
c) No statistics of the expenditure on cleaning materials were available for 1A and 2B. The weight of this expenditure for 3C was used to estimate the required expenditures.
d) No statistics of expenditure on petrol were given for this group of incomes. In fact, no reference at all to this expenditure appears in the 'Budget Survey'. It was felt, however, necessary to make allowance for this item of expenditure at least for the three

higher incomes, that is, 6E, 7F and 8G. Accordingly it was assumed that these incomes spend on petrol the following proportions of corresponding expenditure of the 'representative' income of British Persons, viz., 2BB: 6E — 25 cent and 7F and 8B — 50 per cent. This adjustment is probably conservative.

e) The most disturbing lack of statistical information was that concerning the expenditure of the high salaried Sudanese on 'wines and spirits'. Although they do not purchase these articles necessarily for personal consumption (on religious grounds Moslems are not permitted to consume alcoholic drinks), in view of their position as Civil Servants and their ample social intercourse with British and other expatriate population in the Sudan, they purchase alcoholic drinks for purposes of entertainment. It was assumed that expenditure on 'wines and spirits' of 6E is one-third of the corresponding expenditure of 2BB — the 'representative' income for British Persons — and those of 7F and 8G — one-half.

GROUP 3 — *British Persons.*

Statistics were available for the expenditure on 'car maintenance and petrol'. It was assumed that one-fourth of this expenditure is on car maintenance and three-fourths on petrol.

APPENDIX IIA

The following assuptions and adjustments were made in estimating the amounts of expenditure on imports: —

GROUP 1 — *Low-salaried Sudanese.*

a) No statistics of expenditure on imported foodstuffs were available. However, the weight of expenditure on imports in total expenditure on foodstuffs was given for the 'representative' income 6Q. (p. 7 of the 'Budget Survey'). This was used to estimate the import content of the expenditure on foodstuffs of all other incomes.

b) In order to estimate the import content of expenditures on 'clothing' for each income, these were adjusted for the expenditure on shoes produced in Omdurman (made from locally pro-

duced hide). For this purpose the relevant weight of 6Q was used.

GROUP 2 — *High-salaried Sudanese.*

For this group the appropriate weight of the 'representative' income 5D (p. 5 of the 'Budget Survey') was used to estimate the import content of expenditure on foodstuffs.

GROUP 3 — *British Persons.*

To adjust expenditures on foodstuffs for their import content the appropriate weight of the 'representative' income, viz., 2BB was used (p. 11 of the 'Budget Survey').

APPENDIX IIB

Actual Amounts of Gross Income Spent on Imported Goods

(£E-rounded figures)

Low-salaried Sudanese	1P	2Q	3Q	4Q	5R	6Q	7R	8S	9T
1. Food	7.51	11.4	13.9	18.7	24.5	16.8	24.2	28.6	35.6
2. Tobacco	—	—	—	2.2	2.76	1.89	2.75	3.36	3.93
3. Wines & Spirits	—	—	—	—	—	—	—	—	—
4. Crockery & Eating Utensils	—	.75	1.12	1.04	.98	.81	1.18	1.20	1.81
5. Cleaning Materials	1.02	1.59	2.03	2.52	3.55	2.44	3.53	4.80	5.74
6. Toilet requisites	3.33	4.97	6.08	4.31	6.32	4.47	6.68	7.44	7.55
7. Draperies & Blankets	.54	1.21	1.46	1.63	3.16	1.49	3.14	4.32	6.04
8. Clothing	7.57	12.5	13.9	12.48	19.17	12.47	18.67	22.82	29.32
9. Petrol	—	—	—	—	—	—	—	—	—
10. Total	19.9	32.4	38.5	42.9	60.44	38.37	60.15	72.5	90.0

High-salaried Sudanese	1A	2B	3C	4C	5D	6E	7F	8G
1. Food	8.34	12.54	16.98	16.82	20.56	27.12	38.55	53.38
2. Tobacco	3.00	4.51	6.11	5.99	7.36	9.90	13.46	19.00
3. Wines & Spirits	—	—	—	—	—	8.18	23.25	35.75
4. Crockery & Eating Utensils	.66	1.17	1.13	1.84	2.15	3.01	4.28	7.24
5. Cleaning Materials	1.11	1.67	5.21	6.45	7.06	9.04	12.23	14.4
6. Toilet requisites	7.01	11.36	4.75	5.07	7.05	10.33	15.91	25.33
7. Draperies & Blankets	3.11	4.68	2.03	3.23	4.60	6.46	9.79	16.28
8. Clothing	20.67	30.76	18.33	16.13	33.45	55.97	71.60	102.24
9. Petrol	—	—	—	—	—	2.15	6.12	9.04
10. Total	43.90	66.69	54.54	55.53	82.23	132.46	195.19	269.80

British	1B	2BB	3B	4B	5B	6B
1. Food	81.3	88.9	93.6	82.6	97.8	91.9
2. Tobacco	25.0	20.7	23.6	16.8	20.7	24.1
3. Wines & Spirits	68.5	54.3	61.2	45.0	41.4	59.2
4. Crockery & Eating Utensils	2.98	8.16	8.75	7.39	9.12	9.35
5. Cleaning Materials	8.34	12.1	13.1	10.7	12.4	12.4
6. Toilet requisites	9.53	13.4	14.8	11.4	18.2	16.3
7. Draperies & Blankets	3.57	13.4	17.5	8.06	12.4	9.34
8. Clothing	61.3	72.2	79.6	62.4	78.7	67.7
9. Petrol	17.8	12.8	12.8	12.1	14.1	14.0
10. Total	278.3	296.0	324.9	256.4	304.8	304.3

APPENDIX IIIA

The Calculation of the Money Incidence of Import Duties on Different Income Groups

For this purpose the rates of custom duties applying to particular commodities imported in 1950 were used. These are given below: —

1. Foodstuffs — 10 per cent ad valorem.
2. Crockery and eating utensils — 20 per cent ad valorem.
3. Cleaning materials — 20 per cent ad valorem.
4. Toilet requisites and drugs — 20 per cent ad valorem.
5. Draperies and blankets — 8 per cent ad valorem.
6. Clothing — 8 per cent ad valorem.
7. Petrol — 20 per cent ad valorem.
8. Tobacco £E 2.5 per kilo specific. Average price of tobacco and cigarettes in 1950 was estimated at £E 1.5; hence, on the average, the price and duty was £E 4.0.0 per kilo.
9. Wines and spirits. The average duty was estimated for a composite litre of 'wines and spirits' comprising whisky, sherry, wines and beer. The weights for each item in the total expenditure on 'wines and spirits' was obtained from the Budget Survey (p. 9). These weights refer to British consumption but it was assumed that a similar pattern applies to the Sudanese consumer. The weighted average duty obtained was £E. 434 while the average price (the same weights) was in 1950 £E. 175. Hence the price and duty per litre was, in that year, £E. 609.

The money incidence of custom duties was then estimated from the data of expenditures on imported dutiable commodities (see Appendix IIB). The results are given in Appendix IIIB below.

It is assumed, of course, that although the import duties are paid by the importer to the Customs Department, they are totally shifted to the final consumer. This may not necessarily always be the case but there are no a priori reasons to think that this assumption is unrealistic.

APPENDIX IIIB

Money Incidence of Taxation on Imports

(£E — rounded figures)

Low-salaried Sudanese	1P	2Q	3Q	4Q	5R	6Q	7R	8S	9T
1.	.75	1.14	1.39	1.87	2.45	1.68	2.42	2.86	3.56
2.	—	—	—	1.37	1.72	1.18	1.72	2.10	2.45
3.	—	—	—	—	—	—	—	—	—
4.	—	.150	.224	.208	1.96	1.62	.236	.240	.362
5.	.204	.318	.406	.504	.710	.488	.705	.960	1.148
6.	.66	.994	1.216	.862	1.624	.894	1.336	1.488	1.510
7.	.043	.096	.116	.130	.252	.119	.251	.345	.483
8.	.605	1.00	1.11	.998	1.533	.998	1.493	1.825	2.345
9.	—	—	—	—	—	—	—	—	—
10. Total Incidence	2.268	3.698	4.462	5.942	8.485	5.521	8.161	9.818	11.858

High-salaried Sudanese	1A	2B	3C	4C	5D	6E	7F	8G
1.	.834	1.254	1.698	1.682	2.056	2.712	3.855	5.338
2.	1.875	2.817	3.817	3.742	4.600	6.187	8.412	11.87
3.	—	—	—	—	—	5.82	16.56	25.48
4.	.132	.234	.226	.368	.430	.602	.856	1.448
5.	.222	.334	1.042	1.290	1.412	1.808	2.446	2.88
6.	1.402	2.272	.950	1.014	1.405	2.066	3.182	5.066
7.	.248	.374	.162	.258	.368	.516	.783	1.302
8.	1.653	2.461	1.466	1.290	1.676	4.477	5.728	8.179
9.	—	—	—	—	—	.430	1.224	1.808
10. Total Incidence	6.366	9.746	9.361	9.644	11.947	24.618	43.046	63.271

British Persons.	1B	2BB	3B	4B	5B	6B
1.	8.130	8.890	9.360	8.260	9.780	9.190
2.	15.62	12.93	14.75	10.50	12.93	15.06
3.	48.81	38.69	43.61	32.06	29.50	42.18
4.	.596	1.632	1.750	1.478	1.824	1.870
5.	1.668	2.420	2.620	2.014	2.480	2.48
6.	1.906	2.680	2.960	2.280	3.640	3.260
7.	.285	1.072	1.400	.644	.992	.747
8.	4.904	5.776	6.368	4.992	6.296	5.416
9.	3.560	2.572	2.578	2.420	2.820	2.800
10. Total Incidence	85.479	76.662	86.676	64.638	72.362	85.003

IMPOTS DIRECTS ET INDIRECTS DANS UNE ECONOMIE D'EXPORTATION ETUDE D'UN CAS: LA REPUBLIQUE DU SOUDAN

par Z. M. KUBINSKI•

RÉSUMÉ

Dans cet article, on se propose d'examiner les avantages de l'impôt indirect dans une économie agricole d'export-import telle que celle du Soudan.

Le Soudan a une économie d'exportation dont le coton fournit les revenus en provenance de l'étranger et qui importe les principales denrées, les matières premières et les produits manufacturés.

Le revenu du Gouvernement central provient surtout des impôts indirects, parmi lesquels prédominent les taxes à l'importation. L'importance particulière des impôts indirects dans la fiscalité du Soudan présente plusieurs avantages qui sont administratifs, sociaux, structurels, politiques et de justice. Mais les impôts indirects suggèrent deux objections, ils modifient les précisions de dépenses du consommateur et ils sont régressifs par rapport aux revenus.

L'auteur, cependant, prétend que le premier de ces effets n'a guère d'importance dans le cas du Soudan. En ce qui concerne la deuxième objection, on a essayé de calculer la charge monétaire des impôts indirects sur divers niveaux de revenus monétaires afin de connaître la répartition de cette charge. On obtient un résultat intéressant, à savoir que l'incidence monétaire serait progressivement répartie sur les diverses tranches de revenu brut, mais le degré de progression serait faible. Il semble aussi que les taxes à l'importation jouent au Soudan, jusqu'à un certain point, le rôle d'un impôt progressif sur la dépense. L'étude statistique sur laquelle on s'est appuyé plus haut était fondée sur l'étude des dépenses et des revenus des consommateurs, faite en 1952 à Kartoum par le Service des Statistiques.

La suite de l'article est consacrée à l'examen du problème de l'impôt personnel sur le revenu dans le milieu économique et social soudanais. On étudie les diverses difficultés que présente la création d'un tel impôt. La plus importante est l'impossibilité de l'évaluation des revenus nets imposables, en particulier les dégrèvements pour

charges personnelles. Ceci est surtout dû au fait que le détenteur soudanais de revenus a de multiples obligations d'ordre pécuniaire envers un grand nombre de parents proches ou lointains, c'est-à-dire envers le groupe familial. Ces obligations sont édictées par les exigences de la tradition sociale, par des conditions économiques et par des prescriptions religieuses. Elles diffèrent grandement à la fois par leur nature et par leur but des obligations financières qui se rapportent à la famille dans une société „occidentale", obligations qui, pouvant être aisément évaluées, constituent une base équitable et commode pour le calcul des charges personnelles. D'autre part, au Soudan, les obligations financières en rapport avec les clans familiaux auxquels appartiennent les possesseurs de revenus, consistent en transferts normaux et substantiels du revenu vers les membres de la famille. Outre les transferts monétaires sous forme de prêts, de dons et autres paiements au profit de parents, ces transferts prennent aussi, en quelque manière, la forme d'assistance, par exemple logement, nourriture, transport.

Le système d'assistance mutuelle entre membres d'une même famille joue le rôle du service économiquement indispensable d'entretien des vieillards, des infirmes, des invalides, des chômeurs et des pauvres. C'est la forme tribale du système moderne des services d'assurances et d'assistance sociales.

Pour être équitable, un impôt personnel sur le revenu doit tenir compte de ces transferts dans l'évaluation de la matière imposable. Cependant une évaluation précise et impartiale par le fisc de la grandeur de ces transferts hors du revenu d'un contribuable est pratiquement une opération très difficile.

D'ailleurs, il semble certain que la création d'un impôt sur le revenu, quelque forme qu'il prenne, abaissarait le niveau des transferts à l'intérieur du groupe familial. Une telle interférence avec le système indigène d'assistance familiale est des moins souhaitable; en fait, ledit système doit être protégé jusqu'à ce qu'il soit remplacé par des services efficaces d'assurances et d'assistance garantis par l'Etat.

A part le problème d'évaluation du revenu imposable, il y a d'autres difficultés pour arriver à la réussite de la création d'un impôt sur le revenu dans le système fiscal soudanais.

L'évaluation des revenus bruts serait sérieusement handicapée par le bas niveau culturel de la population et le manque de déclaration des revenus perçus, à l'exception de ceux des fonctionnaires

et des grandes entreprises commerciales et industrielles situées au Soudan et à l'étranger. Il apparaît donc que l'impôt sur le revenu ne s'appliquerait qu'à une faible partie de l'ensemble des revenus.

Pour l'évaluation des revenus bruts perçus et des secours versés, il faudrait un grand nombre d'administrateurs compétents. Mais les fonctionnaires habiles sont en petit nombre dans un pays tel que le Soudan. On peut supposer que le coût du recouvrement d'un impôt personnel sur le revenu serait élevé. Dans un pays qui a une population presque totalement illettrée disséminée sur une très large surface (11,5 millions d'habitants sur une surface de 967,500 milles carrés) le coût des impôts directs de toute nature est élevé en règle générale. En définitive, il ne semble pas que l'impôt sur le revenu fournirait un haut rendement. D'une part, comme il a été indiqué plus haut, le nombre des revenus soumis à l'impôt serait limité; d'autre part, il y aurait facilement matière à évasion.

Il est donc démontré que l'équité, le haut rendement et le faible coût de l'impôt sur le revenu, caractéristiques de cet impôt dans les pays développés ne pourraient l'être au Soudan. Il semble que le création de cet impôt au Soudan fournirait un nouvel exemple de copie inconsidérée des méthodes fiscales „occidentales" dans des conditions nullement appropriées.

CORRECTION

In the article "The 'Taxation' Effects of Alternative Techniques for Trade Protection" by R. Solo in Public Finance, Vol. XIII, No. 3, 1958, six lines were lifted out of their context and shifted elsewhere. Beginning with the last sentence of the second paragraph on page 270, the article should read as follows:

"...With relatively higher prices a consequent reduced consumption of D and F together, would require a larger exclusion of F to maintain the given level of output and consumption of D, and hence the price-effect of techniques of this first category would be to the disadvantage of foreign producers and importers of F. With techniques of the second category, lowering the price of D, in each instance the incidence of the price-effect would be precisely the converse of those described immediately above.

The third basic form of import control is less amenable to the characteristic analysis of excise tax theory. Implicit here is a change in factor-combination and hence in the organization of production and/or in the pattern of consumption, a change which is brought about directly rather than through an alteration of the price relationship. However, although is does not operate *through* an alteration of price relationships, the imposition of this form of control may be presumed to have certain regular effects on existing price relationships and hence to be partly subsumable under the theory of partial excise taxation."

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